

**To:** Atkinson, Emily [mailto:Atkinson.Emily@epa.gov]; WH Energy and Climate Change [Ex. 6 - Personal Privacy]  
**Cc:** Kawahata, Molly; [Ex. 6 - Personal Privacy] Wong, Jacqueline [Ex. 6 - Personal Privacy]  
**From:** WH Energy and Climate Change  
**Sent:** Tue 3/3/2015 10:10:27 PM  
**Subject:** RE: Call - Dan Utech/Janet McCabe

Emily – 11am works perfectly, thanks. Go ahead and extend an hour and we'll make sure Dan and Jackie are on the same page. Thanks for working with us!

Michael

**From:** Atkinson, Emily [mailto:Atkinson.Emily@epa.gov]  
**Sent:** Tuesday, March 03, 2015 5:07 PM  
**To:** WH Energy and Climate Change  
**Cc:** Kawahata, Molly; Wong, Jacqueline  
**Subject:** RE: Call - Dan Utech/Janet McCabe  
**Importance:** High

Could we do this then tomorrow at 11:00am? The non-RFS call is on at 10:30am and includes Janet McCabe and Ben Hengst (and Chris Grundler is on vacation this week).

Could this work on your end? If it does then I can just extend the scheduler and make it an hour meeting.

Emily Atkinson  
Staff Assistant

Immediate Office of the Acting Assistant Administrator  
Office of Air and Radiation, USEPA  
Room 5406B, 1200 Pennsylvania Avenue NW  
Washington, DC 20460  
Voice: 202-564-1850  
Email: [atkinson.emily@epa.gov](mailto:atkinson.emily@epa.gov)

**Ex. 6 - Personal Privacy**

**From:** WH Energy and Climate Change  
**Sent:** Tuesday, March 03, 2015 4:54 PM  
**To:** Atkinson, Emily  
**Cc:** Kawahata, Molly; Wong, Jacqueline  
**Subject:** RE: Call - Dan Utech/Janet McCabe

Emily –

You're correct, but tomorrow's call is specifically on RFS. Sorry for any confusion -- Dan wants a quick call to discuss broader biofuels topics, non-RFS, with Janet and Chris Grundler if possible. 30 minutes would be more than enough time, the only constraint is it needs to happen before we convene a biofuels meeting (w/EOP, DOT, DOE, and Janet) late next week. I hope this clears up the confusion.

Michael

**From:** Atkinson, Emily [<mailto:Atkinson.Emily@epa.gov>]  
**Sent:** Tuesday, March 03, 2015 2:52 PM  
**To:** WH Energy and Climate Change  
**Cc:** Kawahata, Molly; Wong, Jacqueline  
**Subject:** RE: Call - Dan Utech/Janet McCabe

My understanding from Janet is the call tomorrow is on biofuels . . . .

Emily Atkinson  
Staff Assistant

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Room 5406B, 1200 Pennsylvania Avenue NW  
Washington, DC 20460  
Voice: 202-564-1850  
Email: [atkinson.emily@epa.gov](mailto:atkinson.emily@epa.gov)

**From:** WH Energy and Climate Change  
**Sent:** Tuesday, March 03, 2015 2:51 PM  
**To:** Atkinson, Emily  
**Cc:** Kawahata, Molly; Wong, Jacqueline  
**Subject:** RE: Call - Dan Utech/Janet McCabe

**Ex. 6 - Personal Privacy**

Emily –

Sorry to ping again but Jackie and Dan want to get this call with Janet about biofuels on the calendar. Jackie can provide more information if you need it.

Thanks,

Michael

**From:** WH Energy and Climate Change  
**Sent:** Monday, March 02, 2015 1:20 PM  
**To:** 'Atkinson, Emily'  
**Cc:** Kawahata, Molly  
**Subject:** RE: Call - Dan Utech/Janet McCabe

Emily:

Hope you had a wonderful weekend! I haven't been able to catch Dan today to see if he and Janet were able to huddle on Friday.

We'd like to set-up a call with Janet, Dan, and Jackie from our team for Wednesday or Friday (Thursday is looking like it might snow at the moment). If you could send along availability for Wed/Fri it'd be much appreciated! Thank you and best wishes,

Michael

**From:** Atkinson, Emily [Ex. 6 - Personal Privacy]  
**Sent:** Friday, February 27, 2015 12:26 PM  
**To:** WH Energy and Climate Change  
**Cc:** Kawahata, Molly  
**Subject:** RE: Call - Dan Utech/Janet McCabe

I do not believe they have connected today but when they do I can provide you with some dates/times Janet could be available.

Emily Atkinson  
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Office of Air and Radiation, USEPA  
Room 5406B, 1200 Pennsylvania Avenue NW  
Washington, DC 20460  
Voice: 202-564-1850  
Email: [atkinson.emily@epa.gov](mailto:atkinson.emily@epa.gov)

**From:** WH Energy and Climate Change [Ex. 6 - Personal Privacy]  
**Sent:** Friday, February 27, 2015 12:18 PM  
**To:** Atkinson, Emily; WH Energy and Climate Change  
**Cc:** Kawahata, Molly  
**Subject:** RE: Call - Dan Utech/Janet McCabe

Emily – have Janet/Dan been able to touch base? After they do, and if Janet signs-off on a call next week, would you be willing to provide her Wed, Thurs, Fri availability? Thanks in advance for working with us.

All best wishes,

Michael

**From:** Atkinson, Emily Ex. 6 - Personal Privacy  
**Sent:** Friday, February 27, 2015 9:28 AM  
**To:** WH Energy and Climate Change  
**Cc:** Kawahata, Molly  
**Subject:** RE: Call - Dan Utech/Janet McCabe

Thanks Michael – Janet wants to check in with Dan about this before it is scheduled. She will try him shortly.

Emily Atkinson  
Staff Assistant

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Office of Air and Radiation, USEPA  
Room 5406B, 1200 Pennsylvania Avenue NW  
Washington, DC 20460  
Voice: 202-564-1850  
Email: [atkinson.emily@epa.gov](mailto:atkinson.emily@epa.gov)

**From:** WH Energy and Climate Change Ex. 6 - Personal Privacy  
**Sent:** Thursday, February 26, 2015 5:20 PM  
**To:** Atkinson, Emily  
**Cc:** Kawahata, Molly  
**Subject:** RE: Call - Dan Utech/Janet McCabe

Emily:

This call is intended to follow-up on the broader biofuels discussion we had in January with EPA, EOP, and DOT. So, no RFS. Does that help?

Thank you!

Michael

**From:** Atkinson, Emily **Ex. 6 - Personal Privacy**  
**Sent:** Thursday, February 26, 2015 4:11 PM  
**To:** WH Energy and Climate Change  
**Cc:** Kawahata, Molly  
**Subject:** RE: Call - Dan Utech/Janet McCabe

Hi Michael,

I am happy to schedule something for next week, but can you first tell me is this biofuels as in biomass or RFS?

Emily Atkinson  
Staff Assistant

Immediate Office of the Acting Assistant Administrator  
Office of Air and Radiation, USEPA  
Room 5406B, 1200 Pennsylvania Avenue NW  
Washington, DC 20460  
Voice: 202-564-1850  
Email: [atkinson.emily@epa.gov](mailto:atkinson.emily@epa.gov)

**From:** WH Energy and Climate Change **Ex. 6 - Personal Privacy**  
**Sent:** Thursday, February 26, 2015 3:16 PM  
**To:** Atkinson, Emily  
**Cc:** Kawahata, Molly  
**Subject:** Call - Dan Utech/Janet McCabe

Hi, Emily:

Dan would like to set-up a call with Assistant Administrator McCabe to talk about biofuels. Does Janet have availability next Wednesday, Thursday, or Friday? Happy to follow up with more details if you need them.

Thank you and best wishes!

**Michael Robinson**

Executive Office of the President

Domestic Policy Council | Office of Energy and Climate Change

(202) 456-4660 | (202) 456-6353

**To:** Whiteman, Chad;  
**Cc:** Sutton, Tia[sutton.tia@epa.gov]  
**From:** Hengst, Benjamin  
**Sent:** Thur 5/28/2015 5:28:43 PM  
**Subject:** RE: EO 12866 comments on EPA RFS 2014, 2015, 2016 NOPR - RIN 2060-AS22  
Track Changes 5-21 versus 5-27-28.docx

**Ex. 6 - Personal Privacy**

Hi Chad,

Here's the next version of the RFS rule. A few items to flag for you:

- Outlook text, p. 22.
- Table II.D.2-2 (Scenarios) on p. 60. Added footnote indicating potential average ethanol content, expressed as a percentage, in response to comment.
- Cost language, p. 68
- Regulatory Flexibility Act, p. 114: added new agreed-upon language

We also made other minor clean-up/clarifying edits throughout the document, but the significant areas are those in the bulleted list above.

Thanks,

Ben

**To:** Vahlsing, Candace  
**From:** Hengst, Benjamin  
**Sent:** Wed 5/27/2015 4:41:49 PM  
**Subject:** RE: Rollout

**Ex. 6 - Personal Privacy**

On the health benefits, see section IX.K of the preamble (NOT the RIA), summary of costs and benefits. We quantify non-GHG impacts there.

Ben

-----Original Message-----

**From:** Vahlsing, Candace  
**Sent:** Tuesday, May 26, 2015 11:28 PM  
**To:** Hengst, Benjamin  
**Subject:** RE: Rollout

**Ex. 6 - Personal Privacy**

Don't want to call you this late. Q is, looking at the RIA, we didn't quantify health benefits did we/are we adding?

Any type of one sentence explanation before 8 am would be great, if possible. Also available at

**Ex. 6 - Personal Privacy**

-----Original Message-----

**From:** Hengst, Benjamin [mailto:Hengst.Benjamin@epa.gov]  
**Sent:** Tuesday, May 26, 2015 8:33 PM  
**To:** Vahlsing, Candace  
**Subject:** Re: Rollout

just seeing this. sure--call my cell at

**Ex. 6 - Personal Privacy**

---

**From:** Vahlsing, Candace  
**Sent:** Tuesday, May 26, 2015 6:59 PM  
**To:** Hengst, Benjamin  
**Subject:** RE: Rollout

**Ex. 6 - Personal Privacy**

So sorry to ask. But do you have a few minutes to chat later tonight?

-----Original Message-----

**From:** Hengst, Benjamin [mailto:Hengst.Benjamin@epa.gov]  
**Sent:** Friday, May 22, 2015 2:19 PM  
**To:** Reynolds, Thomas; Purchia, Liz  
**Cc:** Vahlsing, Candace; Benenati, Frank; shoshana.lew@dot.gov; Utech, Dan G.; McCabe, Janet  
**Subject:** RE: Rollout

+ Janet M.

-----Original Message-----

**From:** Reynolds, Thomas  
**Sent:** Friday, May 22, 2015 2:16 PM  
**To:** Purchia, Liz  
**Cc:** Hengst, Benjamin; Vahlsing, Candace; Benenati, Frank; shoshana.lew@dot.gov; Dan G. Utech

Subject: Re: Rollout

June 2 makes sense for a variety of reasons. It gives us space from RFS. It's before hydro fracking on June 4. It's early in month which is good on policy side.

A day between HDV and HF would be useful for us.

Unless there are strong compelling reasons not to do June 2 I'd really like to target that.

Sent from my iPhone

> On May 22, 2015, at 1:25 PM, "Purchia, Liz" <Purchia.Liz@epa.gov> wrote:

>

> Is June 2 off the table?

>

> Liz Purchia

> U.S. EPA

> 202-564-6691

> **Ex. 6 - Personal Privacy**

>

>

> On May 22, 2015, at 1:19 PM, Hengst, Benjamin <Hengst.Benjamin@epa.gov> wrote:

>

> Adding in Liz Purchia and Tom Reynolds from EPA coms.

>

> The question on the table: Would June 3 or 8 work for the HDV rollout?

>

>

>

> -----Original Message-----

> From: Vahlsing, Candace [mailto:**Ex. 6 - Personal Privacy**]

> Sent: Friday, May 22, 2015 12:57 PM

> To: Hengst, Benjamin; Benenati, Frank

> Cc: shoshana.lew@dot.gov

> Subject: RE: Rollout

>

> Yup. Adding Frank from WH comms.

>

> -----Original Message-----

> From: Hengst, Benjamin [mailto:Hengst.Benjamin@epa.gov]

> Sent: Friday, May 22, 2015 12:56 PM

> To: Vahlsing, Candace

> Cc: shoshana.lew@dot.gov

> Subject: Re: Rollout

>

> I'd have to loop in others to answer that. Do you want me to do so via email?

>

>

>

>> On May 22, 2015, at 12:46 PM, Vahlsing, Candace **Ex. 6 - Personal Privacy** wrote:

>>

>> Would June 3 or 8 work for the HDV rollout?

**To:** Vahlsing, Candace  
**From:** Hengst, Benjamin  
**Sent:** Wed 5/27/2015 11:47:47 AM  
**Subject:** Re: Rollout

**Ex. 6 - Personal Privacy**

Will call

> On May 27, 2015, at 7:35 AM, Vahlsing, Candace **Ex. 6 - Personal Privacy** wrote:

>

> One more q, as part of Phase II, assume we are extending Phase I to 2020 MYs, except for trailers?  
Why are we waiting until 2021 to phase in new standards?

>

> If you have a minute to give me a call probably easier. **Ex. 6 - Personal Privacy**

>

>

> ----- Original Message -----

> From: Vahlsing, Candace

> Sent: Tuesday, May 26, 2015 11:27 PM

> To: Hengst, Benjamin <Hengst.Benjamin@epa.gov>

> Subject: RE: Rollout

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> Don't want to call you this late. Q is, looking at the RIA, we didn't quantify health benefits did we/are we adding?

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> -----Original Message-----

> From: Hengst, Benjamin [mailto:Hengst.Benjamin@epa.gov]

> Sent: Tuesday, May 26, 2015 8:33 PM

> To: Vahlsing, Candace

> Subject: Re: Rollout

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> just seeing this. sure--call my cell at **Ex. 6 - Personal Privacy**

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> From: Vahlsing, Candace **Ex. 6 - Personal Privacy**

> Sent: Tuesday, May 26, 2015 6:59 PM

> To: Hengst, Benjamin

> Subject: RE: Rollout

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> From: Hengst, Benjamin [mailto:Hengst.Benjamin@epa.gov]

> Sent: Friday, May 22, 2015 2:19 PM

> To: Reynolds, Thomas; Purchia, Liz

> Cc: Vahlsing, Candace; Benenati, Frank; shoshana.lew@dot.gov; Utech, Dan G.; McCabe, Janet

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> + Janet M.

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> Subject: Re: Rollout  
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> A day between HDV and HF would be useful for us.  
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>>> On May 22, 2015, at 12:46 PM, Vahlsing, Candace **Ex. 6 - Personal Privacy** wrote:

>>>

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**To:** Vahlsing, Candace  
**From:** Hengst, Benjamin  
**Sent:** Wed 5/27/2015 12:32:54 AM  
**Subject:** Re: Rollout

**Ex. 6 - Personal Privacy**

just seeing this. sure--call my cell at

**Ex. 6 - Personal Privacy**

**From:** Vahlsing, Candace  
**Sent:** Tuesday, May 26, 2015 6:59 PM  
**To:** Hengst, Benjamin  
**Subject:** RE: Rollout

**Ex. 6 - Personal Privacy**

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**To:** Reynolds, Thomas; Purchia, Liz  
**Cc:** Vahlsing, Candace; Benenati, Frank; shoshana.lew@dot.gov; Utech, Dan G.; McCabe, Janet  
**Subject:** RE: Rollout

+ Janet M.

-----Original Message-----

**From:** Reynolds, Thomas  
**Sent:** Friday, May 22, 2015 2:16 PM  
**To:** Purchia, Liz  
**Cc:** Hengst, Benjamin; Vahlsing, Candace; Benenati, Frank; shoshana.lew@dot.gov; Dan G. Utech  
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>> On May 22, 2015, at 12:46 PM, Vahlsing, Candace

**Ex. 6 - Personal Privacy**

wrote:

>>

>> Would June 3 or 8 work for the HDV rollout?

**To:** Utech, Dan G.  
**From:** Hengst, Benjamin  
**Sent:** Tue 5/26/2015 8:11:06 PM  
**Subject:** RE: RFS roll-out

**Ex. 6 - Personal Privacy**

Sorry for the delay—just sent them

**From:** Utech, Dan G.  
**Sent:** Tuesday, May 26, 2015 3:01 PM  
**To:** Hengst, Benjamin  
**Subject:** RE: RFS roll-out

**Ex. 6 - Personal Privacy**

Hi Ben – apologies for the multiple pings on this – any update? Thanks.

**From:** Hengst, Benjamin [<mailto:Hengst.Benjamin@epa.gov>]  
**Sent:** Tuesday, May 26, 2015 10:49 AM  
**To:** Utech, Dan G.  
**Subject:** RE: RFS roll-out

Dan—just making a few last minute edits. Should get you something in early afternoon.

**From:** Utech, Dan G.  
**Sent:** Tuesday, May 26, 2015 8:53 AM  
**To:** McCabe, Janet; Hengst, Benjamin; Grundler, Christopher; Millett, John  
**Cc:** Purchia, Liz; Wong, Jacqueline  
**Subject:** RE: RFS roll-out

**Ex. 6 - Personal Privacy**

Great, thank you.

**From:** McCabe, Janet [<mailto:McCabe.Janet@epa.gov>]  
**Sent:** Tuesday, May 26, 2015 8:47 AM  
**To:** Utech, Dan G.; Hengst, Benjamin; Grundler, Christopher; Millett, John

**Cc:** Purchia, Liz; Wong, Jacqueline  
**Subject:** RE: RFS roll-out

++ Chris and John.

We had some edits over the weekend, but will get you a revised version as soon as we can.

**From:** Utech, Dan G. **Ex. 6 - Personal Privacy**  
**Sent:** Tuesday, May 26, 2015 8:44 AM  
**To:** Hengst, Benjamin  
**Cc:** McCabe, Janet; Purchia, Liz; Wong, Jacqueline  
**Subject:** RE: RFS roll-out

Good morning – Is there a revised rollout doc? I have some comments on the communications materials that I'd like you to consider but before I make edits I want to be sure I'm working off the latest. Also, Ben are you point on the tick-tock? Would like to get a process going today between here, there and USDA to finalize who is doing what outreach when?

**From:** Hengst, Benjamin [<mailto:Hengst.Benjamin@epa.gov>]  
**Sent:** Tuesday, May 19, 2015 4:41 PM  
**To:** Utech, Dan G.  
**Cc:** McCabe, Janet; Purchia, Liz  
**Subject:** RFS roll-out

Hi Dan,

We discussed the draft roll-out plan for RFS yesterday on the phone. Attached is the current version, which is still draft. Janet OK'd my sending this to you for your review.

Thanks,

Ben

**To:** Utech, Dan G. **Ex. 6 - Personal Privacy**  
**From:** Hengst, Benjamin  
**Sent:** Tue 5/26/2015 2:48:45 PM  
**Subject:** RE: RFS roll-out

Dan—just making a few last minute edits. Should get you something in early afternoon.

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**To:** McCabe, Janet; Hengst, Benjamin; Grundler, Christopher; Millett, John  
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**Subject:** RE: RFS roll-out

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**Cc:** Purchia, Liz; Wong, Jacqueline  
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Hi Dan,

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Thanks,

Ben

**To:** Whiteman, Chad; Sutton, Tia[sutton.tia@epa.gov]  
**From:** Hengst, Benjamin  
**Sent:** Fri 5/22/2015 12:53:20 PM  
**Subject:** RE: EO 12866 comments on EPA RFS 2014, 2015, 2016 NOPR - RIN 2060-AS22  
[EO12866 RFS 2014-2015-2016 Annual Rule 2060-AS22 NPRM FRN 20150521.docx](#)  
[Summary comments from OMB 5-18-15.docx](#)  
[Summary comments from OMB 5-19-15.docx](#)  
[Track Changes 4-29 versus 5-21.docx](#)

**Ex. 6 - Personal Privacy**

**Ex. 5 - Deliberative**

Chad,

Attached are 4 documents for further IA discussions.

1. A revised preamble/regs package (clean)
2. Revised preamble/regs in redline, showing interagency comments and responses
3. Responses to the 5/18/15 summary comments document
4. Responses to the 5/19/15 summary comments document

Thanks,

Ben

**From:** Whiteman, Chad  
**Sent:** Tuesday, May 19, 2015 5:26 PM  
**To:** Hengst, Benjamin; Sutton, Tia  
**Subject:** RE: EO 12866 comments on EPA RFS 2014, 2015, 2016 NOPR - RIN 2060-AS22

**Ex. 6 - Personal Privacy**

Ben & Tia, Attached are additional comments. This should be all for the first round. Chad

**From:** Whiteman, Chad  
**Sent:** Monday, May 18, 2015 6:54 PM  
**To:** 'Hengst, Benjamin'; 'Sutton, Tia'

**Subject:** RE: EO 12866 comments on EPA RFS 2014, 2015, 2016 NOPR - RIN 2060-AS22

Ben & Tia,

Attached are the preliminary EO 12866 interagency comments that were incorporated into the EPA draft preamble/rule document. Please send over the cost memos as soon as possible.

Thanks,

Chad

**From:** Whiteman, Chad

**Sent:** Sunday, May 17, 2015 11:30 PM

**To:** Hengst, Benjamin; Sutton, Tia

**Subject:** EO 12866 comments on EPA RFS 2014, 2015, 2016 NOPR - RIN 2060-AS22

Ben & Tia,

Attached are the preliminary EO 12866 interagency comments on EPA draft rule titled, "Renewable Fuel Standard Program: Standards for 2014, 2015, and 2016 and Biomass-Based Diesel Volume for 2017," RIN 2060-AS22. I plan to send comments for the preamble document on Monday.

Chad

**To:** Farber-DeAnda, Mindi[Mindi.Farber-DeAnda@eia.gov]  
**Cc:** Korotney, David[korotney.david@epa.gov]; Paul Machiele  
(machiele.paul@epa.gov)[machiele.paul@epa.gov]; Dallas Burkholder  
(burkholder.dallas@epa.gov)[burkholder.dallas@epa.gov]

**From:** Hengst, Benjamin

**Sent:** Wed 5/20/2015 12:53:28 PM

**Subject:** RE: RFS comments

EO12866 Summary Comments-EPA RFS 2014-2015-2016 Annual Rule 2060-AS22 NPRM 5\_17\_2015.docx Ex. 5 - Deliberative

Hi Mindi--

We are on for 9am tomorrow--I just sent you a scheduler.

I'm attaching what we received from OMB. It's probably easiest if you and your team walk through this and circle those comments that come from EIA so we can discuss them tomorrow morning.

Also, please send us your spreadsheet calculations when you get a chance.

Thanks,  
Ben

-----Original Message-----

From: Farber-DeAnda, Mindi [mailto:Mindi.Farber-DeAnda@eia.gov]

Sent: Wednesday, May 20, 2015 8:27 AM

To: Hengst, Benjamin

Subject: RE: RFS comments

**To:** Whiteman, Chad  
**Cc:** Sutton, Tia[sutton.tia@epa.gov]  
**From:** Hengst, Benjamin  
**Sent:** Tue 5/19/2015 5:47:55 PM  
**Subject:** Call with EIA on RFS RVO package

**Ex. 6 - Personal Privacy**

Chad,

As we've done on previous RFS rules, we at EPA would like to set up a call to walk through EIA's comments. There are many of them, and we think most of them can be addressed through a conversation and/or better descriptions by EPA. Most will not be of interest to other IA reviewers. I'd like to have that call tomorrow or Thursday.

We'd be happy to have you join, but would you like for us to schedule that and invite you, or would you like to schedule it? If the former, is the main contact Mindi or are there others I should reach out to?

Thanks

Ben

**To:** Whiteman, Chad  
**Cc:** Sutton, Tia[sutton.tia@epa.gov]  
**From:** Hengst, Benjamin  
**Sent:** Tue 5/19/2015 5:04:00 PM  
**Subject:** Draft supporting memos: EPA RFS 2014, 2015, 2016 NOPR - RIN 2060-AS22

**Ex. 6 - Personal Privacy**

[2013 RIN supply.pdf](#)

[2013 RIN supply.pdf](#)

[2014 RIN supply.pdf](#)

[Calculation of % standards for 2014.pdf](#)

[Calculation of % standards for 2015.pdf](#)

[Calculation of % standards for 2016.pdf](#)

[Cellulosic Biofuel Producer Company Descriptions.docx](#)

[Memo to docket on E0 use.docx](#)

[Memo to docket on E15 consumption.docx](#)

[Memo to docket on factors analysis for biomass-based diesel 2014-2017 draft 5-18.docx](#)

[Memo to docket on illustrative costs impact of the proposed annual RFS2 standards, 2014-2017.docx](#)

[Memo to docket on RFS background.docx](#)

[Preliminary Assessment of RIN Market Dynamics.docx](#)

Chad,

Some of the interagency comments requested that we send over technical/supporting memos for review.

Attached you will find not only the memos requested, but all of the memos we will put in the docket for the rulemaking (with one exception; we are still working on one related to cellulosic biogas projections). These include detailed calculations as well as general supporting memos.

Note that these are all still in draft form; we will continue to refine these as we move towards signature on the proposal.

Please circulate to the IA group. I'll give you a call to discuss these a bit further, but please let me know if you have any questions. Thanks, Ben

**Cc:** Sutton, Tia[sutton.tia@ena.gov]  
**To:** Whiteman, Chad[**Ex. 6 - Personal Privacy**]  
**From:** Hengst, Benjamin  
**Sent:** Sun 5/10/2015 1:52:18 PM  
**Subject:** RFS RVO briefing  
Overview of 2014-2015-2016 NPRM for OMB reviewers, v final.pptx

Chad--

Here's the briefing for tomorrow at noon. We will bring hand-outs.

Let me know if anything changes. Otherwise, see you tomorrow.

Thanks,

Ben

**To:** Whiteman, Chad **Ex. 6 - Personal Privacy**  
**From:** Hengst, Benjamin  
**Sent:** Fri 5/8/2015 8:23:26 PM  
**Subject:** RE: Meeting - reschedule to Monday at 12 noon?  
[WAVES Template for Guests RFS May 11 2015.xlsx](#)

Please disregard last one and use this instead

-----Original Message-----

From: Hengst, Benjamin  
Sent: Friday, May 08, 2015 4:22 PM  
To: 'Whiteman, Chad'  
Subject: RE: Meeting - reschedule to Monday at 12 noon?

Chad--here is WAVES info for those folks I think will be coming over. Can you please forward as appropriate? Thanks.

-----Original Message-----

From: Whiteman, Chad **Ex. 6 - Personal Privacy**  
Sent: Friday, May 08, 2015 3:22 PM  
To: Hengst, Benjamin  
Cc: Sutton, Tia  
Subject: RE: Meeting - reschedule to Monday at 12 noon?

Sorry..too fast hitting send. Here is the call-in number that we can use.

Bridge Number **Ex. 6 - Personal Privacy**  
Conferee Passcode **Ex. 6 - Personal Privacy**

-----Original Message-----

From: Whiteman, Chad  
Sent: Friday, May 08, 2015 3:21 PM  
To: 'Hengst, Benjamin'  
Cc: 'Sutton, Tia'  
Subject: RE: Meeting - reschedule to Monday at 12 noon?

We'll be meeting in EEOB 428. We have the conference room from 12-1:30pm.

-----Original Message-----

From: Whiteman, Chad  
Sent: Thursday, May 07, 2015 2:21 PM  
To: Hengst, Benjamin  
Cc: Sutton, Tia  
Subject: RE: Meeting - reschedule to Monday at 12 noon?

Perfect thanks!

Also follow-up up with Tia on the old submission to see about next steps.

-----Original Message-----

From: Hengst, Benjamin [mailto:Hengst.Benjamin@epa.gov]  
Sent: Thursday, May 7, 2015 2:20 PM  
To: Whiteman, Chad

Cc: Sutton, Tia  
Subject: RE: Meeting - reschedule to Monday at 12 noon?

Hi Chad--

Yes, we are confirmed for noon on Monday, May 11. I just put it on people's calendars.

Thanks  
Ben

-----Original Message-----

From: Whiteman, Chad [Ex. 6 - Personal Privacy]  
Sent: Thursday, May 07, 2015 2:14 PM  
To: Hengst, Benjamin  
Cc: Sutton, Tia  
Subject: RE: Meeting - reschedule to Monday at 12 noon?

+Tia

-----Original Message-----

From: Whiteman, Chad  
Sent: Thursday, May 7, 2015 12:03 PM  
To: 'Hengst, Benjamin'  
Subject: RE: Meeting - reschedule to Monday at 12 noon?

Can we reschedule the briefing for Monday at 12 noon? If 12 noon, doesn't work then 4pm would be the next best option. We'll want to do the briefing in person, but will also have a call-in number for those who are not able to make it.

-----Original Message-----

From: Whiteman, Chad  
Sent: Thursday, May 7, 2015 10:00 AM  
To: Hengst, Benjamin  
Subject: RE: Meeting

Yes, let's reschedule. Thanks for the follow-up note.

-----Original Message-----

From: Hengst, Benjamin [mailto:Hengst.Benjamin@epa.gov]  
Sent: Thursday, May 7, 2015 6:32 AM  
To: Whiteman, Chad  
Subject: Meeting

Chad, at one point we had talked about doing a briefing today at 11:30. I'm assuming we need to reschedule that for a different day. Please confirm. Thanks. Ben

**To:** Ben Hengst[bhengst@yahoo.com]  
**From:** Hengst, Benjamin  
**Sent:** Fri 4/10/2015 2:33:07 AM  
**Subject:** Fwd: Consent decree rollout plan -- close hold  
[API AFPM CD roll-out-plan v10 jl.docx](#)  
[ATT00001.htm](#)

Begin forwarded message:

**From:** "Laity, Jim" **Ex. 6 - Personal Privacy**  
**Date:** April 9, 2015 at 6:56:57 PM EDT  
**To:** "Hengst, Benjamin" <[Hengst.Benjamin@epa.gov](mailto:Hengst.Benjamin@epa.gov)>, "Whiteman, Chad"  
**Ex. 6 - Personal Privacy**  
**Subject:** RE: Consent decree rollout plan -- close hold

Ben, one suggestion on p 5 in the attached. Jim

**From:** Hengst, Benjamin [<mailto:Hengst.Benjamin@epa.gov>]  
**Sent:** Thursday, April 09, 2015 5:58 PM  
**To:** Laity, Jim; Whiteman, Chad  
**Subject:** Consent decree rollout plan -- close hold

Jim, Chad, this is still draft and is not for external distribution. Thanks. Ben

**Rollout Plan for:  
Announcement of Proposed Consent Decree between EPA and API & AFPM  
On RFS Volume Rule Dates**

**Current timing: Friday, April 10, at 1:00pm**

**RFS Statement:**

The EPA today announced a proposed settlement with the American Petroleum Institute (API) and the American Fuel and Petrochemical Manufacturers (AFPM) over deadlines for issuing annual requirements under the Renewable Fuel Standard (RFS) program. Under the proposed consent decree, the Agency would issue final annual volume standards for 2014 and 2015 by the end of this year. Although not required by the consent decree, EPA will also finalize the standards for 2016 this year. This schedule is consistent with EPA's commitment to get the RFS program back on track, while providing certainty to renewable fuels markets and promoting the long-term growth of renewable fuels.

The proposed consent decree does not address the content or substance of the volume standards, and it establishes the following schedule:

- By June 1, the agency will propose volume requirements for 2015;
- By November 30, EPA will finalize volume requirements for 2014 and 2015 and resolve a pending waiver petition for 2014.

EPA also announced today that:

- EPA will propose and finalize the RFS standards for 2016 on the same timeline (proposal by June 1, final by November 30);
- EPA will propose and finalize the RFS biomass-based diesel volume requirement for 2017 on the same schedule; and
- The agency will re-propose volume requirements for 2014 that reflect the volumes of renewable fuel that were actually used in 2014.

Biofuels are an important part of the President's energy strategy, helping to curb dependence on foreign oil, cut carbon pollution and drive innovation.

**Further information**

As with any settlement of litigation alleging failure to meet a deadline under the Clean Air Act, EPA will seek public comment on the terms of the settlement for 30 days before deciding whether to proceed with the settlement and seek entry of the consent decree. The proposed consent decree will be available in the public docket, and can also be found at [www.epa.gov/otaq/fuels/renewablefuels/regulations.htm](http://www.epa.gov/otaq/fuels/renewablefuels/regulations.htm).

### **Plans for Roll-out:**

#### *Timing –*

- *Friday, April 10th:*

- 12:45pm      DOJ lodges proposed settlement with the court
- 1:00            Web goes live  
Email announcements go out, Enviroflash notice goes out  
Phone calls to key stakeholders (see below) – no/very limited advance outreach  
OCIR outreach  
Janet to call Sen. Lankford
- 1:15            Press call with multiple press outlets
- OTAQ attendees: Chris Grundler, Ben Hengst (OGC by Lync)
  - Chris to begin with script, then take selected Qs from reporters

### **Materials:**

#### **External:**

- Web Update
  - [www.epa.gov/otaq/fuels/renewablefuels/regulations.htm](http://www.epa.gov/otaq/fuels/renewablefuels/regulations.htm)
- EnviroFlash Notice
- Desk Statement to key RFS reporters

#### **Internal:**

- Roll Out Plan (including list of key stakeholders to contact)

### **Key Messages:**

- EPA is committed to getting the RFS program back on track. All stakeholders want the RFS program back on the statutory timelines. With a final rule for the 2016 standards by November 30<sup>th</sup> of this year, we will be back on the statutory timeline.
- EPA is planning to issue a proposed rule covering 2014, 2015, and 2016 by June 1. We will finalize the rule covering all 3 years by November 30<sup>th</sup>. Our goal is to provide the market with the certainty it needs to continue to grow renewable fuel volumes.
- The 2014 compliance year is now over, and any standard EPA sets for 2014 can no longer influence renewable fuel production or use in that year. This is a significant change in

circumstances from those at the time of our previous proposal. Therefore, EPA has decided that it will issue a new proposal for 2014 that will reflect those volumes of renewable fuel that were actually used in 2014.

- EPA will propose and finalize the RFS biomass-based diesel volume requirement for 2017 on the same schedule.

### **Background:**

- EPA missed the statutory deadline for issuing the annual volume rules under the RFS program for both 2014 and 2015. The annual RFS standards, by law, must be issued by November 30 of the previous year (so, for example, the 2016 standards must be finalized by 11/30/2015).
- In addition, the volume of biomass-based diesel to be used in calculating the annual percentage standard for that fuel type must be established 14 months in advance of the compliance year.
- EPA issued a proposed rule for the 2014 volume rule in November of 2013. EPA sent a draft final rule for 2014 to OMB in August, 2014. The 2014 volume rule has not been finalized, and is technically currently still at OMB undergoing White House review.
- API and AFPM both indicated their intent to sue last year, and filed a joint complaint in the U.S. District Court for the District of Columbia on March 18, 2015 (AFPM v. EPA, No. 15-cv-394).
- EPA entered into negotiations to resolve the litigation with a legally enforceable schedule and is announcing its proposed schedule now.

### **Questions & Answers:**

#### ***What does the consent decree require?***

The consent decree requires that the Agency issue proposed volume requirements for 2015 by June 1, and finalize volume requirements for 2014 and 2015, and act on a pending waiver petition for 2014 by November 30, 2015.

EPA also intends to propose and finalize volume requirements for 2016 along the same timetable, consistent with the Agency's commitment to getting the RFS program back on the statutory timeline.

***Why isn't there a deadline for the 2014 proposal in the consent decree?***

Technically speaking, because EPA still has a proposed rule out for 2014, we could finalize that proposal. Therefore, the CD does not require a deadline for a new proposal on 2014.

However, EPA intends to issue a new proposal for 2014 volumes based on current circumstances and will withdraw the 2014 draft final rule that was submitted to OMB in August of 2014.

***If EPA is re-proposing the 2014 volumes, will EPA withdraw the rule now at OMB from review?***

Yes, EPA intends to withdraw the 2014 draft final rule that was submitted for interagency review at the time we re-propose standards for 2014.

***Is this yet another "sue and settle" agreement?***

EPA, alongside the U.S. Department of Justice (DOJ), carefully and completely assesses the merits of any claims against EPA, our litigation risks based on the law and underlying facts, and the interests of the Agency and the American public. We never agree to final substantive outcomes or otherwise use settlements to circumvent the lawful process for promulgating environmental regulations and standards. When clear deadlines are missed, and EPA is sued on that basis, settlements can allow EPA to avoid unnecessary costs and litigation and focus its resources, and DOJ's, on more productive efforts to advance and defend the Agency's work.

***Does this mean the lawsuit is over?***

While EPA is required to put the proposed settlement out for comment for 30 days, the proposed consent decree provides that the case will be dismissed once EPA completes its obligations under the consent decree.

***What if EPA gets comments opposing the settlement?***

EPA will put the proposed settlement out for comment for 30 days and carefully consider any comments. EPA intends to move forward with the settlement unless the comments provide a basis for concluding that the settlement is inappropriate, improper, inadequate, or inconsistent with the Clean Air Act.

***What if EPA misses its deadline?***

Missing the deadline is not an option for us.

***Why did it take a lawsuit to get EPA to get on track with this program?***

EPA has previously stated our commitment to get the RFS program back on the statutory timeline by finalizing volume rules for 2014, 2015, and 2016 by the end of this year. This consent decree is

consistent with our previous plan.

***Did EPA negotiate anything substantive in this consent decree?***

No. The consent decree establishes deadlines for EPA action but does not address the content or substance of those actions.

***Didn't the lawsuit cover the waiver request, too? How does the CD cover those?***

The proposed consent decree requires EPA to approve or disapprove the waiver request from API and AFPM by November 30, 2015 (i.e., the same schedule as the final rule).

***How does EPA think this rule will impact the RIN market?***

Our focus is on getting the RFS program back on track. EPA cannot speculate on market impacts.

***June 1 is right around the corner, isn't it overly ambitious to develop a proposed rule that covers 3 years AND conduct OMB review in the time that is remaining?***

We have already been working on the proposal because our goal, all along, has been to try to get the RFS program back on track. We are prepared to meet this deadline.

***Can EPA comment on the volumes that will be proposed for 2014-2016?***

The proposed rule is still under development, and we cannot comment on the specifics of the proposal at this time.

***When will you get the package to OMB for review?***

We will get the package to OMB for review as soon as possible.

***Will EPA be releasing the draft final rule now at OMB? If not now, when?***

The draft final rule at OMB no longer reflects the agency's thinking. We are currently focused on preparing the new package of proposed rules and meeting the June 1 deadline. We encourage the public to focus as well on the new proposal when it is issued. We look forward to receiving your comments.

***Why are you putting the biodiesel 2017 rule out on the same schedule?***

The statute requires the volume of biodiesel to be used in calculating the annual percentage standard to be established 14 months in advance of the compliance year. Putting the biodiesel

standard out by November this year will put us closer to back on track with respect to the statutory timeline for biodiesel.

**Anticipated Reactions:**

*Oil Industry:* Supportive of getting the rulemakings back on schedule - it is responsive to their litigation. However, they are not supportive of the RFS program and will likely use it as an opportunity to call for repeal of the program.

*Corn Ethanol Industry:* They are likely to express concern that this somehow represents a back door deal with the oil industry on the content of the standards to be proposed. They will use it as an opportunity to once again call for statutory volumes, actions to support E15 and E30, and express frustrations over EPA's management of the program.

*Biodiesel Industry:* They are likely to be supportive of progress moving forward with establishing standards, especially given the lack of their tax subsidy. They will use it as an opportunity to call for higher biomass-based diesel mandates.

*Advanced Biofuel Industry:* They have the most to gain from progress on the RFS standards and will be supportive of anything that brings progress toward establishing annual standards.

*Ag Interests:* It will depend on their alignment to corn ethanol, soy biodiesel, or to other ag interests that are harmed by the RFS program.

*Environmental Groups/NGOs:* NGOs have generally been disengaged from RFS debates lately. We do not anticipate much reaction, positive or negative, from these organizations. The one exception is UCS, who may put out a statement supporting EPA's attempt to put the program back on track.

**Outreach:**

Stakeholder calls/emails and EnviroFlash

OCIR (see above)

**Key stakeholder calls/emails:**

Name	Organization	Phone	EPA POC responsible for outreach
API, AFPM	API		EPA, DOJ, and litigants will discuss the timing of the

			announcement ahead of time, and do not need to be contacted the day of
Tom Buis	Growth Energy		Janet
Bob Dineen	RFA		Chris
Ann Steckel	NBB		Ben
Mike McAdams	Advanced Biofuels Association		Ben

**To:** Tim Cheung[Tim@cvenergy.com]  
**From:** Hengst, Benjamin  
**Sent:** Thur 4/9/2015 10:13:28 PM  
**Subject:** Re: Contact

Sorry. Have been in meetings. Just tried calling but let's try to connect tomorrow. Thanks. Ben

On Apr 9, 2015, at 2:43 PM, Tim Cheung <[Tim@cvenergy.com](mailto:Tim@cvenergy.com)> wrote:

Hi Ben,

Thanks for the email. I'm available for the next half hour or so if you're free, and I'm with Kevin. Otherwise I could give you a call later this afternoon or tomorrow.

I'm looking forward to chatting!

Thanks,

Tim

--

Timothy T. Cheung

Vice President, Research Analyst

ClearView Energy Partners, LLC

209 Constitution Avenue, NE

Washington, DC 20002

Ex. 6 - Personal Privacy

(mobile)

(202) 506-5744 (office)

(202) 747-1967 (fax)

**From:** Hengst, Benjamin [<mailto:Hengst.Benjamin@epa.gov>]

**Sent:** Thursday, April 09, 2015 12:02 PM

**To:** Tim Cheung

**Subject:** Contact

Hi Tim,

I help run the EPA's Office of Transportation and Air Quality, the group within EPA responsible for implementing, among other things, programs related to transportation fuels (including the RFS) and vehicle air pollution and GHG emissions.

I was hoping we could talk at some point. I had called your office looking for Kevin Book, but was told by the person answering the phone it might be good to speak with you as well. Please give me a ring at your convenience.

Thanks,

Ben Hengst

Associate Director

Office of Transportation and Air Quality

US EPA

202-564-1495

**To:** Jim Laity, **Ex. 6 - Personal Privacy**, Chad  
Whiteman, **Ex. 6 - Personal Privacy**  
**From:** Hengst, Benjamin  
**Sent:** Thur 4/9/2015 9:57:40 PM  
**Subject:** Consent decree rollout plan -- close hold  
[API AFPM CD roll-out-plan v10.docx](#)  
[ATT00001.htm](#)

Jim, Chad, this is still draft and is not for external distribution. Thanks. Ben

**Rollout Plan for:  
Announcement of Proposed Consent Decree between EPA and API & AFPM  
On RFS Volume Rule Dates**

**Current timing: Friday, April 10, at 1:00pm**

**RFS Statement:**

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The proposed consent decree does not address the content or substance of the volume standards, and it establishes the following schedule:

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EPA also announced today that:

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Biofuels are an important part of the President's energy strategy, helping to curb dependence on foreign oil, cut carbon pollution and drive innovation.

**Further information**

As with any settlement of litigation alleging failure to meet a deadline under the Clean Air Act, EPA will seek public comment on the terms of the settlement for 30 days before deciding whether to proceed with the settlement and seek entry of the consent decree. The proposed consent decree will be available in the public docket, and can also be found at [www.epa.gov/otaq/fuels/renewablefuels/regulations.htm](http://www.epa.gov/otaq/fuels/renewablefuels/regulations.htm).

### **Plans for Roll-out:**

#### *Timing –*

- *Friday, April 10th:*

12:45pm      DOJ lodges proposed settlement with the court

1:00            Web goes live  
Email announcements go out, Enviroflash notice goes out  
Phone calls to key stakeholders (see below) – no/very limited advance outreach  
OCIR outreach  
Janet to call Sen. Lankford

1:15            Press call with multiple press outlets

- OTAQ attendees: Chris Grundler, Ben Hengst (OGC by Lync)
- Chris to begin with script, then take selected Qs from reporters

### **Materials:**

#### **External:**

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  - [www.epa.gov/otaq/fuels/renewablefuels/regulations.htm](http://www.epa.gov/otaq/fuels/renewablefuels/regulations.htm)
- EnviroFlash Notice
- Desk Statement to key RFS reporters

#### **Internal:**

- Roll Out Plan (including list of key stakeholders to contact)

### **Key Messages:**

- EPA is committed to getting the RFS program back on track. All stakeholders want the RFS program back on the statutory timelines. With a final rule for the 2016 standards by November 30<sup>th</sup> of this year, we will be back on the statutory timeline.
- EPA is planning to issue a proposed rule covering 2014, 2015, and 2016 by June 1. We will finalize the rule covering all 3 years by November 30<sup>th</sup>. Our goal is to provide the market with the certainty it needs to continue to grow renewable fuel volumes.
- The 2014 compliance year is now over, and any standard EPA sets for 2014 can no longer influence renewable fuel production or use in that year. This is a significant change in

circumstances from those at the time of our previous proposal. Therefore, EPA has decided that it will issue a new proposal for 2014 that will reflect those volumes of renewable fuel that were actually used in 2014.

- EPA will propose and finalize the RFS biomass-based diesel volume requirement for 2017 on the same schedule.

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- In addition, the volume of biomass-based diesel to be used in calculating the annual percentage standard for that fuel type must be established 14 months in advance of the compliance year.
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### **Questions & Answers:**

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EPA also intends to propose and finalize volume requirements for 2016 along the same timetable, consistent with the Agency's commitment to getting the RFS program back on the statutory timeline.

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However, EPA intends to issue a new proposal for 2014 volumes based on current circumstances and will withdraw the 2014 draft final rule that was submitted to OMB in August of 2014.

***If EPA is re-proposing the 2014 volumes, will EPA withdraw the rule now at OMB from review?***

Yes, EPA intends to withdraw the 2014 draft final rule that was submitted for interagency review at the time we re-propose standards for 2014.

***Is this yet another "sue and settle" agreement?***

EPA, alongside the U.S. Department of Justice (DOJ), carefully and completely assesses the merits of any claims against EPA, our litigation risks based on the law and underlying facts, and the interests of the Agency and the American public. We never agree to final substantive outcomes or otherwise use settlements to circumvent the lawful process for promulgating environmental regulations and standards. When clear deadlines are missed, and EPA is sued on that basis, settlements can allow EPA to avoid unnecessary costs and litigation and focus its resources, and DOJ's, on more productive efforts to advance and defend the Agency's work.

***Does this mean the lawsuit is over?***

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***What if EPA misses its deadline?***

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***Why did it take a lawsuit to get EPA to get on track with this program?***

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consistent with our previous plan.

***Did EPA negotiate anything substantive in this consent decree?***

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***Didn't the lawsuit cover the waiver request, too? How does the CD cover those?***

The proposed consent decree requires EPA to approve or disapprove the waiver request from API and AFPM by November 30, 2015 (i.e., the same schedule as the final rule).

***How does EPA think this rule will impact the RIN market?***

Our focus is on getting the RFS program back on track. EPA cannot speculate on market impacts.

***June 1 is right around the corner, isn't it overly ambitious to develop a proposed rule that covers 3 years AND conduct OMB review in the time that is remaining?***

We have already been working on the proposal because our goal, all along, has been to try to get the RFS program back on track. We are prepared to meet this deadline.

***Can EPA comment on the volumes that will be proposed for 2014-2016?***

The proposed rule is still under development, and we cannot comment on the specifics of the proposal at this time.

***When will you get the package to OMB for review?***

We will get the package to OMB for review as soon as possible.

***Will EPA be releasing the draft final rule now at OMB? If not now, when?***

The draft final rule at OMB will ultimately be superseded by whatever we finalize by November 30<sup>th</sup> of this year. We will address release of the draft final rule now at OMB no earlier than November 30.

***Why are you putting the biodiesel 2017 rule out on the same schedule?***

The statute requires the volume of biodiesel to be used in calculating the annual percentage standard to be established 14 months in advance of the compliance year. Putting the biodiesel standard out by November this year will put us closer to back on track with respect to the statutory

timeline for biodiesel.

**Anticipated Reactions:**

*Oil Industry:* Supportive of getting the rulemakings back on schedule - it is responsive to their litigation. However, they are not supportive of the RFS program and will likely use it as an opportunity to call for repeal of the program.

*Corn Ethanol Industry:* They are likely to express concern that this somehow represents a back door deal with the oil industry on the content of the standards to be proposed. They will use it as an opportunity to once again call for statutory volumes, actions to support E15 and E30, and express frustrations over EPA's management of the program.

*Biodiesel Industry:* They are likely to be supportive of progress moving forward with establishing standards, especially given the lack of their tax subsidy. They will use it as an opportunity to call for higher biomass-based diesel mandates.

*Advanced Biofuel Industry:* They have the most to gain from progress on the RFS standards and will be supportive of anything that brings progress toward establishing annual standards.

*Ag Interests:* It will depend on their alignment to corn ethanol, soy biodiesel, or to other ag interests that are harmed by the RFS program.

*Environmental Groups/NGOs:* NGOs have generally been disengaged from RFS debates lately. We do not anticipate much reaction, positive or negative, from these organizations. The one exception is UCS, who may put out a statement supporting EPA's attempt to put the program back on track.

**Outreach:**

Stakeholder calls/emails and EnviroFlash

OCIR (see above)

**Key stakeholder calls/emails:**

Name	Organization	Phone	EPA POC responsible for outreach
API, AFPM	API		EPA, DOJ, and litigants will discuss the timing of the announcement

			ahead of time, and do not need to be contacted the day of
Tom Buis	Growth Energy		Janet
Bob Dineen	RFA		Chris
Ann Steckel	NBB		Ben
Mike McAdams	Advanced Biofuels Association		Ben

**To:** Jesse McCormick[jmccormick@sipa.columbia.edu]  
**From:** Hengst, Benjamin  
**Sent:** Thur 4/9/2015 4:03:43 PM  
**Subject:** RE: Reminder | Invitation-Only Roundtable | The Future of the Renewable Fuel Standard | April 15 @ 12:30pm

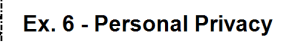
Hi Jesse—I'm still figuring out if I can come. Thanks, Ben

**From:** Jesse McCormick [mailto:jmccormick@sipa.columbia.edu]  
**Sent:** Thursday, April 09, 2015 11:57 AM  
**To:** Jesse McCormick  
**Subject:** Reminder | Invitation-Only Roundtable | The Future of the Renewable Fuel Standard | April 15 @ 12:30pm  
**Importance:** High

I am writing to briefly follow up on the below invitation. We very much hope you can join us. Best, Jesse

Jesse Matthew McCormick

Associate Director | Center on Global Energy Policy | Columbia University

T: (212) 851-0188 |  Ex. 6 - Personal Privacy

[energypolicy.columbia.edu](http://energypolicy.columbia.edu)

[@ColumbiaUEnergy](#)

**From:** Jason Bordoff <jbordoff@sipa.columbia.edu>  
**Date:** Tuesday, April 7, 2015 at 6:24 PM  
**To:** Jason Bordoff <jbordoff@sipa.columbia.edu>  
**Cc:** Jesse McCormick <jmccormick@sipa.columbia.edu>  
**Subject:** Invitation-Only Roundtable | The Future of the Renewable Fuel Standard | April 15 @ 12:30pm

I write to invite you to participate in an invitation-only roundtable about the **future of the Renewable Fuel Standard** with **Dr. James Stock**, economics professor at Harvard and non-Resident Fellow at the Center on Global Energy Policy. Dr Stock previously served as a Member of the President's Council of Economic Advisors. **At this private, off-the-record event Dr. Stock will preview findings from his forthcoming study for the Center on Global Energy Policy about the path forward for the RFS and the regulatory options, legislative options, and complementary measures available to more cost-effectively achieve its intended policy objectives.** In addition to yourself, I am inviting a small number of other senior leaders who focus on energy markets and economics. The roundtable will take place on **Wednesday, April 15 from 12:30 to 2:00pm at the Columbia Club in New York City (15 West 43rd St).** Lunch will be served. Please let Jesse and me know if you are able to participate. I hope you can join us for what promises to be a very timely and interesting conversation. Note this invitation is non-transferable. Thank you. Best, Jason

--

Jason Bordoff

Professor of Professional Practice in International and Public Affairs

Founding Director, Center on Global Energy Policy

Columbia University

[jbordoff@columbia.edu](mailto:jbordoff@columbia.edu)

(212) 851-0193

Visit us at [energypolicy.columbia.edu](http://energypolicy.columbia.edu)

**To:** Whiteman, Chad  
**From:** Hengst, Benjamin  
**Sent:** Tue 2/10/2015 10:35:58 PM  
**Subject:** Re: Senate RFS Letter

**Ex. 6 - Personal Privacy**

Oops, I meant that for Tia.

On Feb 10, 2015, at 5:35 PM, Hengst, Benjamin <[Hengst.Benjamin@epa.gov](mailto:Hengst.Benjamin@epa.gov)> wrote:

Something for our list ☐☐

On Feb 10, 2015, at 4:49 PM, Whiteman, Chad wrote:

**Ex. 6 - Personal Privacy**

Ben,

Here is the draft response letter to Inslee from 2014 that I had referenced. I think that the new Inslee/Brown letter was also address to the OMB Director. Including language like what is in the first paragraph of the attached draft letter would be fine with us. There is some desire here to recognize that OMB received the letter, but we would not want the agency to say that the agency is “responding on behalf.” This language takes a middle of the road approach.

Chad

**From:** Whiteman, Chad  
**Sent:** Tuesday, February 10, 2015 10:59 AM  
**To:** Hengst, Benjamin  
**Cc:** 'Sutton, Tia'  
**Subject:** FW: Senate RFS Letter

Ben, Will you let us have a look at EPA’s response letter? No need to make this a joint letter, but would like to have a look at a draft. I’m assuming the letter will be similar to the Inslee/Brown letter. Thanks, Chad

<Inslee response\_AL-14-000-0276\_OCIR edits.docx>

**To:** Markowitz, Kenneth[kmarkowitz@akingump.com]  
**From:** Hengst, Benjamin  
**Sent:** Mon 2/9/2015 7:29:13 PM  
**Subject:** RE: Meeting with Mr. Grundler February 24 for UOP

Checking on it

**From:** Markowitz, Kenneth [mailto:kmarkowitz@akingump.com]  
**Sent:** Monday, February 09, 2015 12:26 PM  
**To:** Hengst, Benjamin  
**Subject:** RE: Meeting with Mr. Grundler February 24 for UOP

Hi Ben,

Still no word from Bill Charmley. How do you suggest I proceed?

Hope all is going well at home.

Ken

**From:** Markowitz, Kenneth  
**Sent:** Monday, February 02, 2015 4:59 PM  
**To:** Hengst, Benjamin  
**Subject:** Re: Meeting with Mr. Grundler February 24 for UOP

Thank you so much. Get a good night sleep.

Ken

Confidential, for the recipient's use only. Sent from my iPhone. Thanks.

On Feb 2, 2015, at 3:34 PM, Hengst, Benjamin <[Hengst.Benjamin@epa.gov](mailto:Hengst.Benjamin@epa.gov)> wrote:

Ken—no need for us to talk tomorrow.

I've asked Gwen Stewart to go ahead and schedule the UOP meeting – you should hear back from her in the next couple of days.

On Honeywell, I'm passing this along to ASD (the Assessment and Standards Division) in Ann Arbor. Bill Charmley is the head of that division, and his assistant should be reaching out to you to schedule the meeting to discuss both heavy and light duty with Honeywell. Probably best to have the meeting in Ann Arbor.

Let me know if you still need to talk, otherwise we should be all set. Ben

**From:** Markowitz, Kenneth [<mailto:kmarkowitz@akingump.com>]  
**Sent:** Wednesday, January 28, 2015 10:17 AM  
**To:** Hengst, Benjamin  
**Subject:** FW: Meeting with Mr. Grundler February 24 for UOP

Hi Ben,

Fyi, below. (not the heavy duty meeting)

Per my voice message huge congrats on the birth of your third daughter. Hope mom and child are doing well. You must be a very busy guy. Hang in there, I remember moving from man-to-man into zone defense once Elena was born.

I am happy to take you out of the loop on the heavy duty meeting. Just put me in direct touch with your team and I can take it from here.

Take good care and best to family,

Ken

**From:** Markowitz, Kenneth  
**Sent:** Wednesday, January 28, 2015 10:13 AM  
**To:** [stewart.gwen@epa.gov](mailto:stewart.gwen@epa.gov)  
**Subject:** Meeting with Mr. Grundler February 24

Dear Ms. Stewart,

Happy New Year!

I am writing to request a meeting for Veronica May, Vice President and General Manager of UOP, a Honeywell company, with Mr. Grundler on Tuesday, February 24, any time after 2:15 pm. Hopefully, Mr. Grundler will be working in DC that day.

The purpose of the meeting is for Ms. May to introduce herself to Mr. Grundler, as the head of the renewable fuels program at UOP. Ms. May would like to provide an update on the contributions that UOP is making toward the success of the RFS as well as discuss developments in the industry and the RFS program.

Please do not hesitate to contact me with any questions at

Ex. 6 - Personal Privacy

Thanks for your consideration,

Ken

**Kenneth Markowitz** | Consultant

**AKIN GUMP STRAUSS HAUER & FELD LLP**

1333 New Hampshire Avenue, N.W. | Washington, DC 20036-1564 | USA | Direct: +1 202.887.4513 | Internal: 24513  
Fax: +1 202.887.4288 | [kmarkowitz@akingump.com](mailto:kmarkowitz@akingump.com) | [akingump.com](http://akingump.com)

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The information contained in this e-mail message is intended only for the personal and confidential use of the recipient(s) named above. If you have received this communication in error, please notify us immediately by e-mail, and delete the original message.

**To:** Thomas Driscoll[tdriscoll@nfudc.org]  
**From:** Hengst, Benjamin  
**Sent:** Mon 1/12/2015 9:33:05 PM  
**Subject:** RE: Follow-up from yesterday's RFS hearing; National Farmers Union

Great, 2pm it is. Do you know where to go? Clinton North Building, the entrance is right next to the Federal Triangle metro entrance. When you get here, please call Ex. 6 - Personal Privacy or Ex. 6 - Personal Privacy and let them know you are here to meet me. My phone is Ex. 6 - Personal Privacy If you run into problems, it's easiest to email me. Thanks, Ben

**From:** Thomas Driscoll [mailto:tdriscoll@nfudc.org]  
**Sent:** Monday, January 12, 2015 4:26 PM  
**To:** Hengst, Benjamin  
**Subject:** RE: Follow-up from yesterday's RFS hearing; National Farmers Union

Hi Ben,

I just received your voicemail, 2pm would be fine for me. If you could let me know you've received this message, I will see you then.

Thank you,

Tom Driscoll

**From:** Hengst, Benjamin [mailto:Hengst.Benjamin@epa.gov]  
**Sent:** Thursday, January 08, 2015 1:02 PM  
**To:** Thomas Driscoll  
**Subject:** RE: Follow-up from yesterday's RFS hearing; National Farmers Union

Thanks. Let's pencil in 1pm on the 13<sup>th</sup>. I will try to keep it as firm as possible – I generally only have to move it when I really have no choice.

Also, I should let you know that my wife fairly close to her due date (we are expecting), so there's a chance I might have to disappear for that. I'll be joined at the meeting by my colleague, however, so we should still be fairly safe for 1pm on the 13<sup>th</sup>. I'll send you an email on the 12<sup>th</sup> or morning of the 13<sup>th</sup> to confirm everything. Thanks, Ben

**From:** Thomas Driscoll [<mailto:tdriscoll@nfudc.org>]  
**Sent:** Thursday, January 08, 2015 12:57 PM  
**To:** Hengst, Benjamin  
**Subject:** RE: Follow-up from yesterday's RFS hearing; National Farmers Union

Hello:

1pm on the 13<sup>th</sup> is great. Is it safe to commit that time? I could also do 3pm on the 14<sup>th</sup>, but I'd prefer 1pm Jan. 13.

Thank you,

Tom

**From:** Hengst, Benjamin [<mailto:Hengst.Benjamin@epa.gov>]  
**Sent:** Thursday, January 08, 2015 12:50 PM  
**To:** Thomas Driscoll  
**Subject:** RE: Follow-up from yesterday's RFS hearing; National Farmers Union

Hi Tom—I just got put into a meeting that conflicts with 1pm on the 14<sup>th</sup>. Any chance 1pm on the 13<sup>th</sup> works? Otherwise, I could do 3pm on the 14<sup>th</sup>.

Thanks

Ben

**From:** Thomas Driscoll [<mailto:tdriscoll@nfudc.org>]  
**Sent:** Wednesday, January 07, 2015 6:37 PM  
**To:** Hengst, Benjamin  
**Subject:** Re: Follow-up from yesterday's RFS hearing; National Farmers Union

Ben:

Wednesday the 14th at 1pm would work very well for me.

Thank you,

Tom

Sent from my iPhone

On Jan 7, 2015, at 6:31 PM, Hengst, Benjamin <[Hengst.Benjamin@epa.gov](mailto:Hengst.Benjamin@epa.gov)> wrote:

Please call me Ben. Does next Wednesday, 1/14/15, at 1pm work for you to meet here at EPA HQ? Thanks, Ben

**From:** Thomas Driscoll [<mailto:tdriscoll@nfudc.org>]  
**Sent:** Wednesday, January 07, 2015 9:52 AM  
**To:** Hengst, Benjamin  
**Subject:** RE: Follow-up from yesterday's RFS hearing; National Farmers Union

Good morning, Mr. Hengst:

Thank you for your email. I would be very pleased to come in for a meeting next week if you are available. I have pretty open availability, if you would like to suggest a time that works on your end.

I left a voicemail to the same effect; please feel free to disregard it if you've read this first. My direct line is Ex. 6 - Personal Privacy if you'd prefer to call.

Best regards,

Tom Driscoll

**From:** Hengst, Benjamin [<mailto:Hengst.Benjamin@epa.gov>]  
**Sent:** Tuesday, January 06, 2015 8:11 PM  
**To:** Thomas Driscoll  
**Cc:** Niebling, William  
**Subject:** Fw: Follow-up from yesterday's RFS hearing; National Farmers Union

Mr. Driscoll--

Will Niebling put me in touch with you with regards to your request to meet on the RFS. (I'll admit he did so earlier, and I failed to immediately follow up following the hearing last month -- my apologies for not getting back to you earlier.)

I work in the office responsible for implementing the RFS, and I'd be happy to set up a meeting and make sure the right folks are in attendance. Did you have a timeframe in mind? Perhaps as early as next week?

Feel free to email or call me at Ex. 6 - Personal Privacy

Thanks,

Ben Hengst

**From:** Thomas Driscoll <[tdriscoll@nfudc.org](mailto:tdriscoll@nfudc.org)>

**Sent:** Monday, January 5, 2015 13:54

**To:** Niebling, William

**Subject:** RE: Follow-up from yesterday's RFS hearing; National Farmers Union

Mr. Niebling:

Happy New Year.

I wanted to follow up and see whether you would be able to meet to discuss any way National Farmers Union may be able to be helpful with regards to the RFS. It is a major priority for our members. Do you have any availability this month?

Thank you for your consideration.

Sincerely,

Thomas Driscoll

Government Relations Representative

National Farmers Union

20 F St. NW Suite 300

Washington, DC 20001

202-554-1600 Main

**From:** Thomas Driscoll

**Sent:** Thursday, December 11, 2014 1:13 PM

**To:** '[niebling.william@epa.gov](mailto:niebling.william@epa.gov)'

**Subject:** Follow-up from yesterday's RFS hearing; National Farmers Union

Mr. Niebling:

Thank you for taking the time to speak with me after yesterday's House Oversight Committee hearing.

I am a government relations representative with National Farmers Union here in Washington, DC. NFU is the second-oldest and second-largest general farm organization in the U.S. We represent about 200,000 family farmers and ranchers.

The Renewable Fuel Standard is a matter of serious importance to our members. We did a lot of work to present a more nuanced view from rural America on WOTUS, and I believe our efforts created some value for the agency. We would appreciate the opportunity to be as helpful with the RFS. Please let me know how we can contribute.

Thank you for your consideration.

Best regards,

Thomas Driscoll

Government Relations Representative

National Farmers Union

20 F St. NW Suite 300

Washington, DC 20001

202-554-1600 Main

**To:** Thomas Driscoll[tdriscoll@nfudc.org]  
**From:** Hengst, Benjamin  
**Sent:** Thur 1/8/2015 5:50:17 PM  
**Subject:** RE: Follow-up from yesterday's RFS hearing; National Farmers Union

Hi Tom—I just got put into a meeting that conflicts with 1pm on the 14<sup>th</sup>. Any chance 1pm on the 13<sup>th</sup> works? Otherwise, I could do 3pm on the 14<sup>th</sup>.

Thanks

Ben

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Tom

Sent from my iPhone

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I left a voicemail to the same effect; please feel free to disregard it if you've read this first. My direct line is 202-314-3108 if you'd prefer to call.

Best regards,

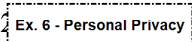
Tom Driscoll

**From:** Hengst, Benjamin [<mailto:Hengst.Benjamin@epa.gov>]  
**Sent:** Tuesday, January 06, 2015 8:11 PM  
**To:** Thomas Driscoll  
**Cc:** Niebling, William  
**Subject:** Fw: Follow-up from yesterday's RFS hearing; National Farmers Union

Mr. Driscoll--

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Feel free to email or call me at  Ex. 6 - Personal Privacy

Thanks,

Ben Hengst

**From:** Thomas Driscoll <[tdriscoll@nfudc.org](mailto:tdriscoll@nfudc.org)>

**Sent:** Monday, January 5, 2015 13:54

**To:** Niebling, William

**Subject:** RE: Follow-up from yesterday's RFS hearing; National Farmers Union

Mr. Niebling:

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Thank you for your consideration.

Sincerely,

Thomas Driscoll

Government Relations Representative

National Farmers Union

20 F St. NW Suite 300

Washington, DC 20001

202-554-1600 Main

**From:** Thomas Driscoll

**Sent:** Thursday, December 11, 2014 1:13 PM

**To:** 'niebling.william@epa.gov'

**Subject:** Follow-up from yesterday's RFS hearing; National Farmers Union

Mr. Niebling:

Thank you for taking the time to speak with me after yesterday's House Oversight Committee hearing.

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The Renewable Fuel Standard is a matter of serious importance to our members. We did a lot of work to present a more nuanced view from rural America on WOTUS, and I believe our efforts created some value for the agency. We would appreciate the opportunity to be as helpful with the RFS. Please let me know how we can contribute.

Thank you for your consideration.

Best regards,

Thomas Driscoll

Government Relations Representative

National Farmers Union

20 F St. NW Suite 300

Washington, DC 20001

202-554-1600 Main

**To:** Thomas Driscoll[tdriscoll@nfudc.org]  
**From:** Hengst, Benjamin  
**Sent:** Wed 1/7/2015 11:31:20 PM  
**Subject:** RE: Follow-up from yesterday's RFS hearing; National Farmers Union

Please call me Ben. Does next Wednesday, 1/14/15, at 1pm work for you to meet here at EPA HQ? Thanks, Ben

**From:** Thomas Driscoll [mailto:tdriscoll@nfudc.org]  
**Sent:** Wednesday, January 07, 2015 9:52 AM  
**To:** Hengst, Benjamin  
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**Subject:** Fw: Follow-up from yesterday's RFS hearing; National Farmers Union

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Feel free to email or call me at 202-564-1495.

Thanks,

Ben Hengst

**From:** Thomas Driscoll <[tdriscoll@nfudc.org](mailto:tdriscoll@nfudc.org)>

**Sent:** Monday, January 5, 2015 13:54

**To:** Niebling, William

**Subject:** RE: Follow-up from yesterday's RFS hearing; National Farmers Union

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Sincerely,

Thomas Driscoll

Government Relations Representative

National Farmers Union

20 F St. NW Suite 300

Washington, DC 20001

202-554-1600 Main

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**Sent:** Thursday, December 11, 2014 1:13 PM

**To:** 'niebling.william@epa.gov'

**Subject:** Follow-up from yesterday's RFS hearing; National Farmers Union

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Thank you for your consideration.

Best regards,

Thomas Driscoll

Government Relations Representative

National Farmers Union

20 F St. NW Suite 300

Washington, DC 20001

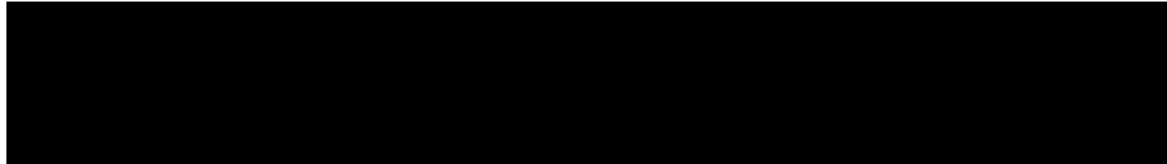
202-554-1600 Main

**To:** Whiteman, Chad **Ex. 6 - Personal Privacy**  
**From:** Hengst, Benjamin  
**Sent:** Fri 11/21/2014 3:52:10 PM  
**Subject:** FW: Notice of Intent to Sue (2014 RFS)  
RFS 2014 Notice of Intent to Sue 112014.pdf

FYI.

**To:** White, Thomas[Thomas.White@hq.doe.gov]  
**From:** Hengst, Benjamin  
**Sent:** Fri 11/21/2014 1:54:05 PM  
**Subject:** Re: Meeting w/ Racetrac

They are meeting with our AA so that might not be the right level of discussion (ours will be high level, not too technical).



Ben,

Is there any reason why we should meet separately? Can we piggy back on your meeting?

Thanks,

Tom

Thomas White

U.S. Department of Energy

Office of Energy Policy and Systems Analysis

202-586-1393

[thomas.white@hq.doe.gov](mailto:thomas.white@hq.doe.gov)

**From:** Fialkov, David [mailto:dfialkov@steptoe.com]  
**Sent:** Friday, November 21, 2014 8:03 AM  
**To:** White, Thomas  
**Subject:** Meeting w/ Racetrac

Mr. White, good morning,

I was given your contact information by Ben Hengst at EPA. He indicated that you may be interested in meeting with some of the fuel folks from Racetrac when they are in town to meet with EPA. We would love to meet with you. Our schedule at this point is to meet with EPA from 11:15-noon on December 4<sup>th</sup>. We would be able to meet with you either before that meeting with EPA or after. (Racetrac folks have a 5:00 flight out of DCA that day.)

I represent the Society of Independent Gasoline Marketers of America and the National Association of Convenience Stores. Our hope is that this meeting would provide you an opportunity to get the retailers' perspective on the RFS, along with any other matters you would like to address. Thanks very much, I look forward to hearing from you.

-David

**David H. Fialkov**

Associate

[dfialkov@steptoe.com](mailto:dfialkov@steptoe.com)

**Steptoe**

Steptoe & Johnson LLP

1330 Connecticut Avenue, NW

Washington, DC 20036

[www.steptoe.com](http://www.steptoe.com)

+1 202 429 1361 direct

Ex. 6 - Personal Privacy

 mobile

+1 202 429 3902 fax

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ED\_000497\_00022553



**To:** Whiteman, Chad[Ex. 6 - Personal Privacy]  
**Cc:** Nagelhout, Peter[Nagelhout.Peter@epa.gov]; Argyropoulos, Paul[Argyropoulos.Paul@epa.gov]  
**From:** Hengst, Benjamin  
**Sent:** Fri 10/31/2014 1:43:09 PM  
**Subject:** RE: EO 12866 comments on EPA 2014 RFS RVO draft final rule (2060-AR76)  
[Examination of the RIN Market and Fuel Market Impacts.docx](#)  
[EPA response to 10.8.14 Interagency Comments on 2014 RFS RVO draft FRM.docx](#)

Hi Chad,

Attached please find a document that responds to interagency comments on the 2014 RFS RVO draft final rule. The response document covers both attachments you sent on 10/8/14. Given where we are in the process, we did not put together a redline version of the draft final rule, though we would prepare a redline passback for future iterations, as appropriate.

Separately, I have attached an additional technical memo. I previously sent you a few technical memos associated with the draft rule, but this one was finished a little later. I will give you a call to discuss.

Thanks,

Ben

**From:** Whiteman, Chad[Ex. 6 - Personal Privacy]  
**Sent:** Wednesday, October 08, 2014 11:51 AM  
**To:** Hengst, Benjamin  
**Subject:** EO 12866 comments on EPA 2014 RFS RVO draft final rule (2060-AR76)

Ben,

Attached are the EO 12866 comments on the EPA draft final rule titled, "2014 Standards for the Renewable Fuel Standard Program," RIN 2060-AR76. The summary comment document contains some detail on the suggested changes to the percent standards based on the October

2014 STEO update. We may have additional comments, but I wanted to get these over to you.  
Please let me know if you have any questions.

Regards,

Chad

## Response to 10/8/14 comments from interagency review

Page numbers refer to draft final rule submitted to OMB on 8/22/14

Page	Comment/edit	Response
6	Text changed to "substantially increase the cost of supplying"	See response to comments A3 and A4.
7	A2: This reference to the statutory objectives is consistent with the arguments provided for choosing option 1 over option 3 for the advanced category. Adding this text will provide EPA flexibility in the future. It is conceivable that future growth in the cellulosic industry could create a situation in which reducing the total volume requirement would impinge on cellulosic production. In that case, the EPA could balance the costs of moving slightly beyond the blendwall with the GHG benefits of greater cellulosic ethanol production.	Changes to text are reasonable.
7	A3: As noted subsequently on page 33, the blendwall is not a cap on the amount of ethanol that can be blended with gasoline. Rather, the blendwall represents an inflection point of the cost of blending increasing volumes of ethanol with gasoline. Therefore, the reduction in statutory volumes is based on the high cost of moving significantly beyond 10% ethanol (i.e., after accounting for E0, E15, and E85 as in Section IV.F). The proposed language clarifies that the blendwall introduces a cost of increasing ethanol volumes, and that the EPA's decision to reduce the statutory volume is based on a comparison of those costs with the energy security and GHG benefits of higher volume.	It is true that greater consumption of higher ethanol blends would require substantial reductions in the retail selling price of those blends compared to E10. However, as discussed in Section IV.C.1.b.vi (page 102 of the package containing OMB's comments), the available data suggests that the RFS program has considerably less influence on the retail selling price of higher ethanol blends than has been assumed to date. As a result, the blendwall cannot be characterized merely as a point of inflection in compliance costs. It is a supply issue, which is why we are waiving the standards based on inadequate domestic supply. We can discuss further if necessary.
9	A4: This edit is suggested for the same reason as described in the comment on pages 6-7. There are numerous other references in the rule to "constraints" related to the blendwall. The commenter suggests replacing "constraints" with "costs" or similar language.	We do not agree that the blendwall is better described as a matter of cost than as a constraint. We can discuss further if necessary.
12	A5: Please reconcile with \$0.62 per credit on p. 183	We will reconcile the numbers.

16	<p>A6: Percentages changed because of updated SEDS and STEO October 2014 data impacting the gasoline &amp; diesel volumes that serve as denominators. Explained in footnote 220 on p. 180. The STEO updates can be found at: <a href="http://www.eia.gov/forecasts/steo/">http://www.eia.gov/forecasts/steo/</a> The values applied and methodology are contained in the EO 12866 summary comment document.</p> <p>Also, comments A7, A8, and A9.</p>	See separate discussion of the calculation of the percentage standards at the bottom of this table.
20	<p>A10: Please update the following citations at the appropriate page.</p> <p>Pages 20, 28 n.15, 72, 126 n.139, 130 n.145, 144 n.159: Here are the Federal Reporter citations for the cases cited on these pages: <i>Monroe Energy, L.L.C. v. EPA</i>, 750 F.3d 909 (D.C. Circuit 2014); <i>National Petrochemical &amp; Refiners Ass’n v. EPA</i>, 630 F.3d 145 (D.C. Cir. 2010), reh’g en banc denied, 643 F.3d 958 (D.C. Cir. 2011), cert. denied, 132 S. Ct. 571 (2011). To our knowledge, the second case is not abbreviated as “NPRM v. EPA.” Also, the second Federal Reporter citation to this case at the bottom of page 20 is incorrect.</p>	We will investigate and update as appropriate.
20	<p>A11: This section addresses the issue of legal authority, but as throughout the rule, does not appear to address the implications of the fact that calendar year 2014 will likely be 75% over before the rule is issued. The argument made here would appear to apply equally if the rule was issued at the end of the year, when obligated parties would have already made all their transactions for the year. It is important that the demonstrations of what is possible in 2014 focus on what can be achieved in the remaining portion of 2014, not assuming the counterfactual that the full year is available for compliance. This section may need to be reevaluated depending on when review of the rule is complete.</p>	We agree that the applicable volume requirements for 2014 should take into account actual volumes that have been produce in 2014 to date. We will re-evaluate the applicable volume requirements in the draft final rule with this in mind. However, we believe that this legal discussion applies regardless of the date that the rule is issued, so do not believe changes to this text are warranted.
21	<p>A12: This whole argument may not be correct with respect to biodiesel and advanced.</p>	We do not agree that the argument would be inapplicable to advanced biofuel. We agree that since there is no statutory applicable volume for biomass-based diesel in 2014 that

		additional discussion related to this fuel type is warranted.
21	<p>A13: Although obligated parties may not need lead times for investment purposes, producing renewable fuels from existing plants does require some lead time, such as for securing feedstock, transportation, etc. The commenter suggests deleting this section of the paragraph because it implies that RIN generation can respond very quickly to market or regulatory conditions. The final rule does not provide evidence that is the case.</p> <p>+ deleted text.</p>	We will re-evaluate the text in question in light of the delay in issuing the final rule.
21	<p>A14: Following the last comment, the issue is not whether obligated parties have been acquiring 2014 RINs since January, it is whether they will be able to respond to the changes between the proposed and final rules by the end of 2014.</p> <p>+ deleted text.</p>	We will re-evaluate the text in question in light of the delay in issuing the final rule.
21	<p>A15: This language could be read as implying that the EPA's decision to increase production quantities was based partly on the size of the RIN carryover bank. That interpretation would be inconsistent with language elsewhere in the rule, stating that EPA has not set the final volumes based on the expectation that the RIN bank will be depleted. To avoid confusion, the commenter suggests striking this clause.</p> <p>+ deleted text</p>	We agree with deleting the text in question.
21	<p>A16: It will be helpful to provide here, or elsewhere in the rule, some indication of when the proposed rule for 2015 will be released. Knowing the schedule can help planning decisions and could reduce market volatility that could otherwise occur when the 2014 rule is published.</p>	Unexpected delays in completing review of the 2014 draft final rule makes it clear that we cannot specify a schedule for release of the 2015 rulemaking to which the Administration can currently commit.
22	<p>A17: Note to continue to check EMTS for the latest volume information while the rule is under review.</p>	We will re-evaluate the applicable 2014 volume requirements based on a review of actual supply to date in 2014 using data from EMTS, and will make adjustments accordingly.
23	Various edits.	Added text presumes that stakeholders

		have made these suggestions in their comments in response to the NPRM. OMB has not indicated whether this is true and who made these suggestions. The deleted text is an actual stakeholder comment, and thus should not be deleted.
23	A18: Why only hybrids. Or why hybrids at all.	The text in question reflects a comment from an external stakeholder, not a position or concept from EPA.
24	A19: One commenter suggested reiterating this statement in an appropriate section at the beginning of the preamble.	We will consider this.
29	A20: What is the source for the 2,800. It is not in the article, even though this language implies that it is. The article references 2,625 in 2013.  The TIE article provides background on 2007-2013 stations, but never forecasts the number of stations in 2014.	The 2,800 number is cited in a memo to the docket that is cited later in the draft final rule. We will add the citation here as well.
32	A21: Commenter suggests adding this condition and the sentence at the end of the paragraph for the same reason as provided in the comment on pages 6-7, namely, to clarify that the cost of blending ethanol with gasoline increases suddenly around the E10 blendwall.	See response to comments A3 and A4.
32	A22: Is this the definition that EPA uses for the blendwall. Is it defined somewhere else?	Our preferred term is "E10 blendwall" rather than just "blendwall" to clarify that we are speaking of the limit in the amount of ethanol that can be consumed as E10 rather than a limit in the total amount of ethanol that can be blended into gasoline at any blend level
32	A23: This sentence is consistent with the discussion of 2013 RIN prices on page 35.	We agree that moving further beyond the E10 blendwall than we have included in the draft final rule would likely result in an increase in RIN prices. Nevertheless, we do not agree that the higher RIN prices would be reflected in lower E85 prices at retail in comparison to E1-0. See response to comments A3 and A4.
32	A24: Suggest deleting footnote 26.	Why delete a citation to the source of the data discussed in the text?
32	A25: Suggest deleting footnote 27.	Why delete a citation to the source of

		the data discussed in the text?
32	<p>A26: The commenter is concerned with this characterization because EISA also legislated significantly higher fuel economy standards that have been a major contributor to trends in gasoline consumption. This indicates that Congress accounted for this in their formulation of the RFS amendments in EISA. This issue came up in the NPRM and was handled in accord with the suggested revisions made here – suggest doing the same here.</p> <p>+ various edits</p>	We will consider making changes to the text in accord with the changes we made to the NPRM.
33	A27: Please provide the study and the cite. Some have asserted that the study only examined the effect of E15 on the emissions systems, and not the entire engine/fuel system. Please explain.	We will add a citation to the study results and the other places in the preamble where this issue is discussed.
33	Various edits.	The suggested changes are reasonable.
33	A28: 78 gas stations nationwide selling E15 out of 150,000 stations is a really low number. Suggest rewording the sentence to not use the word progress.	The sentence references both E15 and E85, and there has been progress on both fronts. There does not appear to be a compelling reason to change the text.
34	A29: Recommend using the October 2014 STEO everywhere. Updated values were released on October 7, 2014 at <a href="http://www.eia.gov/forecasts/steo/">http://www.eia.gov/forecasts/steo/</a> .	We will use the most recent available version of the STEO when we set the applicable standards for 2014, and in other contexts as appropriate and as time allows.
35	A30: One commenter suggested reiterating this statement in an appropriate section at the beginning of the preamble.	We agree.
35	A31: Not clear as blendwall was so far out in the future then. Is this statement supported by the EIA projections that were used to establish the mandated volumes in the statute?	There is no explicit record of the EIA projections, if any, that were used by Congress to establish the mandate volumes in the statute. In the RFS2 final rule (March 26, 2010) we projected that it would be difficult for the mandated volumes to be reached without significant volumes of both higher level ethanol blends and non-ethanol biofuels. In light of these 2010 projections, we will modify the discussion of Congressional intent.
42	A32: For clarity, please consider re-wording/sentence structure or making multiple	We will modify the text for clarity.

	sentences.	
44	A33: The commenter notes the addition of biogas to the RFS in the cellulosic category and would like to know more about the methodology for determining the volumes of fossil fuels that would be replaced by CNG and LNG made from biogas. At this point there may be no concern about competing with cellulosic ethanol in this category. However, this year we have begun to see large scale commercial production of cellulosic ethanol in the United States. What are EPA's long term goals for biogas in the RFS, for 2015 and beyond?	CNG/LNG derived biogas can only generate RINs if it is used as transportation fuel, and therefore is assumed to displace gasoline or diesel fuel. We do not have concerns about cellulosic CNG/LNG competing with cellulosic ethanol. The cellulosic standard is based on projections of both sources of cellulosic biofuel. Further, while there are some commercial scale cellulosic ethanol facilities that are now complete, they are not yet currently producing RIN generating gallons and combined, they only account for a maximum of 50 mg per year in production.
48	A34: The commenter agrees that the methodology proposed by EPA in the 2014 final rule may predict realistic volumes for liquid cellulosic biofuel production in 2014; however, the commenter is concerned that this methodology may significantly underestimate production beginning in 2015-2016 as facilities receiving federal funding begin producing at volumes closer to their capacity. The commenter is concerned that such a conservative methodology in 2014 could have the effect of preventing growth and causing undue skepticism among investors, potentially depressing what would otherwise be realistic production levels in future years. The commenter appreciates that EPA's 2014 methodology does not dictate the methodology in future years, and urges EPA to emphasize that point in the rule's text.	The existing text already indicates that the methodology for 2014 may be adjusted for future years. Thus it is not clear what changes are needed.
65	A35: Text on p. 48-49 says postponed until Sept. 2014	Text and table will be updated to reflect October 17, 2014 facility opening
65	A36: Should this be 14-39? (per text on p. 52 and p. 54 and Table III.B.1-1 and Table III.D-2 on p. 68, and text.	Yes, table will be updated
65	A37: Open house was 9/3/14. Suggest revising to probably 2nd half or 3rd Quarter?	Table will be revised to reflect Sept. Opening
66	A38: Suggest revising as it seemed speculative.	Text will be revised
66	A39: Footnote 76 projects 5 MM gal for EPA,	Footnote will be corrected to 3 MG

	contradicting 3 MM gal elsewhere?	
68	A40: Suggest describing what constitutes “consistent” commercial scale production	For the purposes of this rulemaking “consistent” production means a facility producing at consistent or increasing production levels for the previous 6 months. We can add a clarification to the text.
69	A41: Suggest providing the cite for the D.C. Circuit case rescinding EPA’s 2012 cellulosic biofuel standard. It is American Petroleum Inst. v. EPA, 706 F.3d 474, 479 (D.C. Cir. 2013).	We will add the proper citation.
79	A42: These changes are suggested for consistency with the previous changes to the discussion of the E10 blendwall.	See response to comments A3 and A4.
87	A43: The estimate seems high as there are fewer than 100 E15 gas pumps, not even stations, in the entire nation.	Commenter did not provide reasons for why the analysis provided in the memorandum to the docket is faulty. Nevertheless, we will update the analysis and projected volume of E15 as more recent information becomes available.
92	A44: It is possible that states that have more pumps are more likely to sell more per pump as consumers are more familiar with the fuel. Moreover, those states also include two farm states where part of the demand may be driven by values and not economics, a situation that we cannot assume is replicable around the country.	Without data to confirm or deny the possibilities raised by the commenter, there is no way to determine if the per-station sales volumes from the five states in Table IV.C.1.b.i – 1 are higher than per-station sales volumes in other states. Absent such data, the simple extrapolation using ratios that was employed is appropriate.
92	A45: EIA does not collect this information.	Text will be corrected as noted
92	A46: To the extent that people are buying cars that just happen to be FFVs, with little interest, in areas where fuel is not available? Please explain.	There is essentially no data on the intent of people purchasing FFVs. More importantly, our analysis accounts for FFVs in areas where E85 is not available. If the commenter has specific suggestions for clarifying language, we will consider it.
94	A47: Can the agency use other terminology besides “significant incentive?” We’ve heard many say that there is not enough incentive for consumers to purchase E85 and for gas stations to install the needed equipment to sell E85.	The incentive is primarily for installation of E85 equipment, not necessarily for consumers to increase consumption of E85. As described in Section IV.C.1.b.vi, RIN values are being taken as a significant windfall profit by wholesalers and retailers,

		and/or to pay off their infrastructure investment. This does in fact provide a significant incentive for new retailers to enter the E85 market.
95	A48: In support of future rulemakings, DOE would be happy to share pricing data for E85 from the Office of Energy Efficiency and Renewable Energy's Alternative Fuels Data Center (AFDC) to supplement EPA's current sources for price data. The AFDC collects and posts pricing data quarterly. Data collected between July 1 and July 15, 2014, show that the nationwide average price per gallon was \$3.23 for E85 and \$3.70 for gasoline. DOE collects this data by requesting that Clean Cities coordinators, fuel providers, and other key stakeholders provide prices for fuels in their areas on a voluntary basis; prices are collected for all major alternative fuels currently in widespread use, as well as for conventional fuels at stations that also sell alternative fuels, or at nearby stations.	Any state-specific E85 price data would be welcome if corresponding E10 price data is also available. Also, it would be useful to understand if this is a volume weighted average or just price posted average.
95	A49: Will EPA add a little more explanation here? We were also told that NACS may be coming out with updated information that may be used for this analysis.	<p>The details of the analysis are provided in a memo to the docket, as stated in the preamble text. If the commenter has suggestions for additional explanation that would be helpful in the preamble, we are open to suggestions.</p> <p>We are not aware of updated data from NACS.</p>
96	A50: Suggest clarifying. What is a "price reduction?" Is what you mean that E85 sold for 15 percent less per actual physical gallon than E10?	We will modify the text to clarify.
97	A51: Suggest clarifying. Do you mean that the average discount on a per gallon basis was too small to reduce the price of E85 so that it was equal to E10 on an energy content adjusted basis? In other words, it typically sold at a premium on an energy content adjusted basis.	We will modify the text to clarify.
98	A52: Was EPA able to verify prices as they appear to be all over the place? Did EPA consider that retailers could simply be trying to figure out how to price it? Please explain.	A memo to the docket verifies that the price data from E85prices.com is closely correlated with the price data provided by the five states used in the analysis. This suggests that the data is

		accurate. While it is likely that some retailers regularly change E85/E10 price ratios to measure consumer reaction, for the nation as a whole it is much more likely that the average E85 price reflects the profit-maximizing point.
99	A53: Suggest including D5 in Title and labelling axis units	We will make this edit.
99	A54: More, perhaps, but not a majority. First, many have no access to fuel. Second there is strong evidence that people highly value convenience, and this fuel requires more trips to the gas station.	We will clarify text to indicate that the "majority" applies to those FFV owners with access to E85. Inconvenience can be mitigated by further E85 price reductions, which is consistent with the current text.
100	A55: A 17% discount would still be a premium price to pay for E85 on an energy content basis? (additional text in comment was unreadable)	Correct.
101	A56: Is there any evidence that prices are systematically lower in states with more E85 pumps?	We agree that it would be worthwhile to investigate any potential correlation between E85/E10 price ratios and the number of pumps. We will consider this for future analyses if data permits.
115	A57: The list has changed as the industry has contracted (number of producers, especially since the biodiesel tax credit ended). Production and capacity utilization are down, and biodiesel RINs are less than \$1.00.	Capacity utilization has changed, but total production capacity has not. The purposes of the list of biodiesel plants was to establish the upper limit of production capacity.
116	A58: It would be relevant to extend this through the first half of 2014, as data is available and relevant.	We agree.
117	A59: Production in the latter half of 2013 spiked to beat the expiration of the impending tax credit – is this text relevant?	This is a forward looking statement acknowledging that projected soy oil cost reductions should directly impact the cost of soy oil biodiesel production and, in turn, biodiesel prices. This projection is not tied to 2013 production spikes so seems to be relevant.
118	A60: This approach to generating high and low-end projections is reasonable if the EPA is attempting to estimate future production. However, in the case of the 2014 rule, the EPA does not need to project ranges of production for all of 2014, but just for the period in 2014	We agree that, due to the tardiness in releasing the 2014 standards final rule, the projected volumes in the draft final rule may not be achievable. We intend to update the required volumes using the most recent information available

<p>that follows the final rule (more specifically, the period that follows the last month for which production data are available, which is currently July 2014). That is, bio-diesel production is already known for January – July, and perhaps through August by the time the final rule will be published. Therefore, the only uncertainty for production is over the months August or September through December of 2014, and it is unclear why the EPA must project a quantity that is already partially known.</p> <p>An alternative approach would be for the EPA to project the portion of 2014 production that is truly unknown, and take production in January – July 2014 as given. The low end would be unchanged, 1.47 billion gallons. However, the high end would be different because we know that production from January-July of 2014 was less than this high-end estimate. Applying the same methodology as in the draft final rule to the August – December production yields a high-end estimate of 1.58 billion gallons. Thus, the high end would be about 180 million gallons lower than that given in the final rule.</p> <p>The risk of attempting to project annual production when part of the year’s production is already determined is that the EPA could, in principle, obtain unreasonable projections. For example, this could happen if production in the first part of the year is unusually high or low for some factor unrelated to the RFS (e.g., drought). Three things are worth noting in support of this alternative approach. First, using the alternative methodology to determine the D4 requirement would reduce the requirement by roughly 100 million gallons compared to the level in the final rule, which is not insignificant compared to expected total D4 generation for the remainder of 2014. Second, this distinction could matter in future years. Third, it would be straightforward for market participants to adjust their projections</p>	<p>on actual production in 2014.</p>
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	of the volume requirements based on the month of the final rule—this would be important in the event that future volume requirements are finalized later than the statute date.	
118	A61: The biodiesel numbers would be from a period where the tax credit was expiring. Was EPA able to take this into account in any way?	We acknowledge that the expiring biodiesel tax credit likely influenced the high biodiesel production volumes at the end of 2013. However, those production volumes are indicative of what the industry is capable of achieving, and are therefore relevant in helping to determine what volumes are achievable in the near future.
119	<p>A62: As commented previously, the question is not whether these quantities are achievable on an annual basis—almost surely, they are because of the upward trend in total biodiesel production that has been noted elsewhere in the rule. Instead, the question is whether the quantity is achievable based on production that has already occurred before the final rule is published. Language here and elsewhere should be adjusted accordingly.</p> <p>To the extent that the text is interpreted as developing the standard based on an assumption about future tax changes, would it create additional legal liability? Should these first three sentences be deleted?</p>	<p>See response to comment A60.</p> <p>We agree that the text could be read to suggest that the projected volumes assume that the biodiesel tax credit will be reinstated. It was not our intention to make this connection, and the text will be modified to clarify.</p>
119	A63: Regarding production, the BBD tax credit can be enacted retroactively, but it cannot retroactively incentivize production.	We agree.
124	A64: It is important to distinguish the treatment of the carryover RINs in 2013 from the treatment in 2014. It seems reasonable to draw a line at some level of carryover RINs, and decide that carryover below that level would provide too little flexibility. The commenter suggests that EPA provide more information about how it will determine the line in the future. This would help market participants anticipate how the blend-wall will be handled in future rulemakings, and would reduce the perverse incentives mentioned in the summary of public comments below (page	This will by necessity be an issue that will be dealt with in future years based on the circumstances at hand and the available information.

	<p>126).</p> <p>For example, suppose there are 2 billion carryover RINs going into 2015. Would the EPA consider that to be sufficiently large to allow for some draw-down in 2015? The commenter appreciates that EPA does not want to commit to a firm number, but providing some indication of how the decision will be made in the future would be helpful. For example, a short discussion of uncertainty in EIA gasoline demand forecasts and other relevant factors would give a sense of the appropriate size of the bank.</p>	
138	A65: Should this be 30, consistent with Table IV.D.1.a-1?	Yes. We will make the correction.
138	A66: According to trade data for pure biodiesel (B100), exports and imports have both dramatically decreased this year compared to 2013. There is probably a connection between this and the expiration of the biodiesel blender's credit at the end of 2013. Given that your actual volumes for 2013 are based on "the most recent 12 months," your biodiesel volume would include the extremely high biodiesel productions of the latter half of 2013 before the expiration of the credit. How has this been taken into consideration in your methodology? Will this have an impact on the volumes of the Advanced Biofuels category, which also includes sugarcane ethanol?	See response to comment A61.
139	A67: The "actual" volume of sugarcane ethanol listed for 2013 was 435 million gallons, but the agency only allows 227 million gallons for 2014. Given that the California LCFS survived the Supreme Court challenge as of June 30, I am sure that EPA took into account that more imports of ethanol from Brazil are expected in future years (assuming economic factors and climate conditions are also favorable). How did EPA balance the projected import numbers with the total advanced volume level? Does EPA expect this methodology to apply in the future or will there be flexibility to change the	It is not correct to say that "the agency only allows 227 million gallons for 2014". It is true that the volume of sugarcane ethanol included in the 2014 projection is 227 mill gal, based on actual imports in the most recent 12 months. But once the standard is set, higher volumes can be imported if they can compete with other advanced biofuels and can be consumed given constraints on the sale of higher ethanol blends. California has projected 2014 imports of sugarcane ethanol at about 200 mill gal, and we do intend to

	<p>methodology for 2015 and beyond, if necessary?</p> <p>Under the interagency Renewable Energy and Energy Efficiency Export Initiative established in 2010, several federal agencies have increased their efforts to promote exports of renewable fuels. Reduced production and layoffs are of concern and providing more certainty regarding the mandates will be important to ensure future investment.</p>	<p>account for future projections from California in future standard-setting rulemakings.</p> <p>We did not "balance" projected import numbers with the total advanced volume level. Instead, the advanced biofuel standard was based on the sum of the projected supply of all individual sources, one of which was imported sugarcane ethanol.</p>
140	<p>A68: Commenter is concerned that this statement may not be accurate. Global ethanol buyers are indifferent between ethanol sourced from different crops, and will allow supplies to be diverted to the US. Even Brazil has engaged in two way ethanol trade with the United States.</p>	<p>It is our understanding that sustainability is a factor for some countries that import renewable fuels, and that this could affect the sources they choose. If the commenter has evidence to the contrary, we can discuss it. Regarding ethanol trade with the U.S., import/export data indicates that this has rarely been on a gallon-for-gallon basis.</p>
146	<p>A69: Flagging for additional discussion. The commenter would like to discuss further the use of alternative baselines as well as estimates of the benefits associated with the rulemaking.</p>	<p>We would be happy to discuss further.</p>
150	<p>A70: The cost-benefit discussion regarding sugarcane ethanol as an avenue for compliance with the advanced biofuel requirement suggests that sugarcane ethanol would displace petroleum gasoline in the U.S. market. For reasons argued throughout the draft, this seems unlikely in 2014 given the limited ability of the motor fuel market to absorb high-ethanol blends in the near term. At least in the short-term, sugarcane ethanol is more likely competing with corn ethanol to supply the ethanol submarket within the larger motor fuels market.</p>	<p>For the purposes of providing illustrative estimates, the costs for sugarcane ethanol are only considered in the context of the advanced standard (in which corn ethanol cannot compete). Therefore, this analysis only considers the potential costs associated with sugarcane ethanol replacing petroleum gasoline. The alternative would be that the advanced standards would be met by another type of advanced fuel, such as biomass-based diesel. Furthermore, the analysis included in this rulemaking does not reflect any assessment by EPA of which fuels are least costly as a means of meeting the advanced standard - our projections are based on volumes of each source that are reasonably achievable. EPA is providing illustrative estimates of the potential</p>

		cost impacts if the advanced volume mandate were met by either sugarcane ethanol or soybean oil-based biodiesel
150	A71: Sugarcane ethanol competes for volumes with corn-based ethanol for the limited capacity to absorb ethanol in the motor fuel pool. Sugarcane ethanol would not displace petroleum gasoline.	See response to comment A70.
155	A72: Adding this sentence would provide further support for the EPA's flexibility in adjusting the total volume in future years, when other considerations may apply.	Our methodology does not include any consideration of balance as suggested by the added text. Instead, the projected volumes are what we believe can reasonably be achieved.
160	A73: What about the role of the biodiesel tax credit which expired? It would be expected to influence the production levels.	The tax credit does not affect the volume levels that are achievable. See response to comment A61.
162	A74: Investment decisions for advanced biofuels other than biodiesel will be made partly based on the gap between the D5 and D4 requirements. The commenter suggests that EPA provide further information on how it determines the appropriate "incentive for development and growth". This information would provide greater certainty for potential investors in new plants of the available market size. For example, is the appropriate incentive determined by looking at the past levels of non-biodiesel D5? Should market participants expect the gap between D5 and D4 to grow over time, allowing for greater competition?	The current preamble text contains a description of the assessment that led to the decision that the biomass-based diesel standard would be 1.6 bill gal, and the associated impacts on parties that produce advanced biofuels other than biomass-based diesel. If the commenter would like to discuss it further, we can set up a meeting.
164	A75: For the reason provided in the above comment, and as noted in the rule on page 165, this statement may be true in the short run, but not in the long run. Potential investors in non-biodiesel advanced biofuel plants will consider the expected gap between D5 and D4 when making investment decisions. The suggested edit makes this sentence consistent with the discussion of long-run implications on page 185.	The suggested change is reasonable.
169	Additional text at bottom of page	The scenario envisioned by additional text is just one of many, and requires several assumptions about how the market would operate. As a result, the additional text unnecessarily complicates a relatively simple

		<p>concept. Given that the biodiesel standard is nested within the advanced fuels standard, the production of biodiesel over the biodiesel standard means that less of other advanced fuels need to be produced to meet the overall advanced fuel standard. However, the projected volumes of advanced biofuel already account for biodiesel production above the biomass-based diesel standard. Advanced ethanol would only be reduced insofar as biodiesel exceeded our projections, and even then the required amount of conventional renewable fuel would be unchanged even though there would be additional room for ethanol to be consumed. Given the wide range of possible scenarios, there does not appear to be any reason to highlight one particular scenario or to change the approach to projecting volumes.</p>
170	<p>A76: The situation is likely more complex than indicated in the text, and depends on which type of advanced biofuel is competing with biodiesel. Suppose biodiesel production increases by one gallon and this displaces one gallon of imported biodiesel. In that case, the statement is correct, that the energy security (and environmental) impacts of the additional biodiesel should be evaluated relative to the other advanced biofuel. But the situation is different if the increase in biodiesel production is matched by a reduction in imported Brazilian ethanol. In that case, the biodiesel does displace a gallon of diesel. Assuming the blend-wall is a binding constraint, the reduction in Brazilian ethanol could be matched by an increase in corn ethanol. In this case, counter to the first case, the biodiesel benefits (energy security, environmental, etc.) should be compared against a simultaneous reduction in diesel consumption and a shift from advanced ethanol to conventional ethanol. The commenter suggests revising this paragraph to allow for this uncertainty.</p>	<p>See response to suggested text for page 169.</p>

	+ deleted text	
170	A77: Again, to recognize the timing of the final rule.	See response to comment A60.
170	A78: Suggest stating that there is consistent growth as opposed to “a stabilizing trend” due to the limited number of data points.	We will modify the text to clarify.
179	A79: Please provide the EIA letter.	The EIA letter will be in the docket. We can also provide it to OMB.
179	A80: Please describe the changes made to the small refiners provisions in the Pathways II final rulemaking.	We will consider adding a description.
180	<p>A81: How many small refinery/small refiner exemptions were made in the 2013 compliance period?</p> <p>Stakeholders commented that EPA changed the parameters it considers when evaluating small refinery/refiner petitions. Please explain.</p>	This is not a relevant issue for the 2014 standards final rule, since we have not issued any small refinery exemptions for 2014 and therefore have not accounted for any such exemptions in deriving the 2014 standards.
181	<p>A82: Please include the GS, RGS, GE, DS, RDS, and DE values in this table.</p> <p>Also, will EPA explain the significance of the values presented in footnote 220.</p> <p>Suggested Revised footnote values based on October 2014 STEO update  <a href="http://www.eia.gov/forecasts/steo/">http://www.eia.gov/forecasts/steo/</a>.</p> <p>From the August STEO update, AK Ocean-going vessels were estimated at 6.9% of U.S. vessel bunkering and applied to the U.S. ocean-going vessel volume. Please verify for the October 2014 STEO update.</p>	<p>All values not presented in the table are zero, as stated in the text.</p> <p>Values in the footnote are components of the calculation of the inputs to the percentage standards.</p> <p>When the final rule is released, we will make an effort to ensure that the most recent data is used.</p>
181	<p>A83: Please update based on the new new AK maritime diesel values.</p> <p>Also, comments A84, A85, A86, and A88</p>	<p>When the final rule is released, we will make an effort to ensure that the most recent data is used.</p> <p>Information on ocean-going vessel volumes was provided directly by EIA in a letter from John Conti dated August 12, 2014.</p>
183	A87: Please reconcile with \$0.53 per credit on p. 13 and p. 191	We will reconcile the numbers. See also response to comment A5.

	Also, comment A89	
--	-------------------	--

*Separate comments from OMB entitled, "Comments on U.S. Environmental Protection Agency's final rule titled, "2014 Standards for the Renewable Fuel Standard Program," RIN 2060-AR76" related to calculation of the applicable percentage standards*

Response:

In general we intend to use the most recent projections provided by EIA in the calculation of the applicable percentage standards. Depending on the timing of the interagency process and Administrator signature of the rulemaking package, however, it may not always be practical to do this.

With regard to projections of fuel used in ocean-going vessels, we intend to continue to rely on the nationwide value of 24,000 barrels per day as provided in the August 12, 2014 letter from John Conti at EIA. If the commenter believes that value to be in error, we can set up a call to discuss it. We appreciate the updated values for fuel consumed in Alaska.

**To:** Whiteman, Chad[**Ex. 6 - Personal Privacy**]  
**From:** Hengst, Benjamin  
**Sent:** Thur 9/25/2014 12:44:10 AM  
**Subject:** Thursday's 2:30 call on RFS RVO rule

Hi Chad--

For Thursday's 2:30 meeting with USDA, USTR and others, here are some materials for distribution to those that will join the call. These are materials already in the rulemaking docket.

Thanks, Ben

From the Govt. of Brazil: << File: UNICA comment on 2014 RFS.pdf >>

#### AIDE-MEMOIRE

Cooperation between Brazil and the U.S. has progressed significantly, particularly with regard to the goals of the biofuels sustainability analysis, conversion R&D, and the memorandum of Understanding, which includes cooperation in third countries as well as cooperation on aviation biofuels. Additionally, both countries are formally engaged in a Strategic Energy Dialogue, which established a permanent group to exchange information about short- and medium-term planning on production and supply in order to evaluate how complementary biofuel production is in both countries.

The Brazilian Government would like to share its view that ethanol trade must be fostered. Furthermore, RFS2 policy introduced an important driver of investments in many countries that have benefited from Brazil-U.S. cooperation in this area by identifying feasible projects.

Sugarcane ethanol has played a key role in helping the United States achieve its goals for energy security and GHG emissions reduction under the EISA.

Any reduction of the U.S. biofuels requirement will be viewed as a significant setback, one that will induce similar decisions in other regions and give reason to those who oppose biofuels as a sustainable energy alternative.

The Government of Brazil is concerned about the impact that the proposed rules for the 2014 RFS could have on bilateral trade. The higher cuts (41%) proposed for advanced renewable fuel in comparison to other types of biofuels (10% for conventional biofuels and 16% on average) may result in discrimination against foreign-produced ethanol and be especially harmful to Brazilian ethanol exporters.

Brazil has already informed the EPA that it would have up to 800 million gallons of sugarcane ethanol to export to the U.S. in 2014. As these estimates were included in the proposed rule, is there any specific reason for the EPA to not take this volume into consideration in the advanced biofuels pool?

The goals of the RFS program are clear: reduce GHG emissions and improve energy security. Brazil has consistently helped the U.S. achieve these goals since the beginning of the RFS. As per the EPA's own calculations, sugarcane ethanol reduces GHG emissions by at least 61% relative to gasoline. Given sugarcane ethanol's higher GHG performance, Brazil suggests that the EPA include in the RFS mandate for 2014 as much sugarcane ethanol as Brazil can provide.

Brazil is also concerned with the possible impacts of an unbalanced RFS mandate that prevents imports of sugarcane ethanol and generates an excess of U.S.-produced corn ethanol that will not be absorbed entirely by the U.S. market. Such movement would exert downward pressure on corn prices and lead to increased ethanol production in the U.S. in the short term, which would add more pressure on the EPA (E15).

As we have been able to liberalize the biofuels markets between our countries, Brazil is willing to maintain the ongoing dialogue between our government agencies and assure that we will continue to contribute to the goal of the RFS.

Based on these considerations, we would like to respectfully request that the EPA include the available volume of sugarcane ethanol from Brazil into the final rule of the 2014 RFS.

Washington, DC, December 19<sup>th</sup> 2013

From UNICA:

And that is to say nothing of the harm the proposed rule would inflict on States like California, with its Low Carbon Fuel Standard ("LCFS"). EPA acknowledges the connection between the RFS2 and the LCFS in the NPRM.<sup>54</sup> Under the LCFS, California rates sugarcane ethanol as the best-performing low-carbon fuel on the market today.<sup>55</sup> Indeed, sugarcane ethanol is among the principle commercial-scale ethanol fuels capable of meeting the LCFS's lifecycle GHG emissions requirements.<sup>56</sup> For this reason, regardless of any cuts EPA makes to the total renewable fuel RVO or the advanced biofuel RVO, it is inevitable that sugarcane ethanol will continue to be a major renewable fuel source in States like California, which imported 90 million gallons of sugarcane ethanol in 2012 alone.<sup>57</sup> Reducing the RVO for renewable fuels and advanced biofuels will not change that outcome. It will, however, decrease nationwide demand

for advanced ethanol biofuels, placing the burden of paying for such fuels exclusively on States like California, where sugarcane ethanol is an essential means of meeting the LCFS's requirements. Far from alleviating severe economic harm, then, the proposed rule actually threatens economic harm for millions of Americans.

#### **IV. Reducing the Required Volume of Advanced Biofuel is Contrary to the Policy of the RFS2.**

Given the clear statutory limitations on EPA's ability to implement its proposed cuts in the required volume of total renewable fuels, EPA should reconsider its proposal to reduce the required volume of advanced biofuels by 1.55 billion gallons. In the NPRM, EPA proposes to require purchase or production of only 2.20 billion gallons of advanced biofuels, even though the statute specifies that 3.75 billion gallons shall be required for 2014. In light of both the RFS2's clear policy favoring advanced biofuels over fuels with higher GHG lifecycle emissions and the President's June 2013 Climate Action Plan,<sup>77</sup> which also expressly favors biofuels for the "role [they] play in increasing our energy security, fostering rural economic development, and reducing greenhouse gas emissions from the transportation sector,"<sup>78</sup> UNICA believes EPA's proposal is misguided.

As detailed above, advanced biofuels have considerably lower lifecycle GHG emissions than fossil fuels and conventional biofuels. For that reason, Congress wrote the RFS2 to favor advanced biofuels over not just fossil fuels, but also over conventional biofuels.<sup>79</sup> Congress' preference for the production and use of advanced biofuels over other fuel sources was manifested, not just in statements made during passage of the RFS and RFS2, but in the structure of the RFS2 itself. Specifically, Congress (1) imposed a minimum volume requirement for advanced biofuels, and (2) mandated that, by no later than 2016, all increases in the RFS2 be met *exclusively* by using advanced biofuels.<sup>80</sup> Those aspects of the RFS2 make clear that Congress intended the measure to promote advanced biofuels, such as sugarcane ethanol, not just over fossil fuels, but also over conventional biofuels with higher lifecycle GHG emissions.

EPA's proposed reduction in the required volume of advanced biofuels would defeat Congress' intent in passing the RFS2. Congress passed the RFS2 to ensure that advanced biofuels made up a greater share of America's fuel supply, but Option 3 of the proposed rule expressly reduces that share. Sugarcane ethanol is presently the largest, most commercially viable source of advanced renewable fuels, yet the proposed rule completely ignores it when calculating required advanced biofuel volumes for 2014.<sup>81</sup> And while Congress structured the EISA so that advanced biofuels would supplant conventional biofuels in the nation's fuel supply, the proposed rule incentivizes the purchase of less-eco-friendly conventional fuels and fossil fuels while concomitantly disincentivizing the purchase of cleaner, more efficient advanced biofuels such as sugarcane ethanol.

The proposed rule will inevitably have two effects. First, it will reduce investment in, and production of, advanced biofuels, as investors and producers reevaluate EPA's commitment to the standards and goals Congress clearly set out in the RFS2. Second, by reducing incentives to produce and supply advanced biofuels, the proposed rule will expand the use of less-eco-friendly fuels, increasing GHG emissions and exacerbating the very environmental harms the EISA was meant to correct. Those consequences amply demonstrate why and how Option 3 of the proposed rule does not and cannot comport with Congress' intent in enacting the EISA. Given the statute's unequivocal preference for the use of advanced biofuels over conventional biofuels, a policy that increases use of conventional biofuels at the expense of advanced biofuels such as sugarcane ethanol is fundamentally at odds with the environmental goals of the RFS2.

Barton) ("We're mandating 35 billion gallons of alternative fuels that right now the technology simply doesn't exist.").

<sup>76</sup> See *id.*

<sup>77</sup> Executive Office of the President, The President's Climate Action Plan (June 2013), *available at* <http://www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf>.

<sup>78</sup> *Id.* at 8.

<sup>79</sup> See, e.g., 153 Cong. Rec. H16659, 16742 (2007) (statement of Rep. Peterson) (noting that EISA "set[s] the stage

for the next generation of ethanol, which is going to be cellulosic, and for new feedstocks for biodiesel"); 153 Cong.

Rec. H16659, 16751 (2007) (statement of Rep. Stark) ("I hope that the environmental safeguards

contained in the  
Renewable Fuel Standard—which mandates production of 36 billion gallons of biofuels by 2022—will  
quickly  
push production away from corn ethanol and toward advanced cellulosic fuels.”); 153 Cong. Rec.  
H16659, 16751  
(2007) (statement of Rep. Van Hollen) (“I am especially pleased that this RFS includes a substantial  
requirement for  
advanced biofuels from a variety of different feedstocks . . .”).  
<sup>80</sup> 42 U.S.C. §7545(o)(2)(B).  
UNICA Comments on Proposed 2014 RFS Standards Page 22  
EPA-HQ-OAR-2013-0479

**To:** Tracy A. Nagelbush[tan@vnf.com]  
**From:** Hengst, Benjamin  
**Sent:** Mon 9/22/2014 5:14:13 PM  
**Subject:** RE: Gilbarco Veeder-Root

Can you just email me when you are downstairs? The guards will call me, but I'll send an assistant down to bring you guys up. Thanks. Ben

**From:** Tracy A. Nagelbush [mailto:tan@vnf.com]  
**Sent:** Monday, September 22, 2014 1:04 PM  
**To:** Hengst, Benjamin  
**Subject:** Re: Gilbarco Veeder-Root

We are! Shall I ring you at tel

Ex. 6 - Personal Privacy

**Tracy Nagelbush | Senior Director, Governmental Issues**

**VanNess**

**Feldman** LLP

1050 Thomas Jefferson Street, NW

Washington, DC 20007

T: (202) 298-1937 | C: (202) 258-5871 | [tan@vnf.com](mailto:tan@vnf.com) | [vnf.com](http://vnf.com)

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On Sep 22, 2014, at 12:56 PM, "Hengst, Benjamin" <[Hengst.Benjamin@epa.gov](mailto:Hengst.Benjamin@epa.gov)> wrote:

Hi Tracy—we still on for today at 3?

**From:** Tracy A. Nagelbush [<mailto:tan@vnf.com>]  
**Sent:** Friday, September 05, 2014 3:10 PM  
**To:** Hengst, Benjamin  
**Subject:** RE: Gilbarco Veeder-Root

I will take it! Thanks!

**Tracy Nagelbush | Senior Director, Governmental Issues**

**VanNess**

**Feldman** LLP

1050 Thomas Jefferson Street, NW

Washington, DC 20007

T: (202) 298-1937 | C: (202) 258-5871 | [tan@vnf.com](mailto:tan@vnf.com) | [vnf.com](http://vnf.com)

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**From:** Hengst, Benjamin [<mailto:Hengst.Benjamin@epa.gov>]  
**Sent:** Friday, September 05, 2014 3:04 PM  
**To:** Tracy A. Nagelbush  
**Subject:** Re: Gilbarco Veeder-Root

Sure. How about 3pm on the 22nd.

**From:** Tracy A. Nagelbush  
**Sent:** Friday, September 5, 2014 1:53 PM  
**To:** Hengst, Benjamin  
**Subject:** RE: Gilbarco Veeder-Root

Ben,

My client has been called to Dallas on the 15<sup>th</sup>. Are you and your team available on the 22<sup>nd</sup>? We are available between 11 and 430 pm.

Apologies for the scheduling snafu!

Many thanks,

Tracy

**Tracy Nagelbush | Senior Director, Governmental Issues**

**VanNess**

**Feldman** LLP

1050 Thomas Jefferson Street, NW

Washington, DC 20007

T: (202) 298-1937 | C: (202) 258-5871 | [tan@vnf.com](mailto:tan@vnf.com) | [vnf.com](http://vnf.com)

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**From:** Hengst, Benjamin [<mailto:Hengst.Benjamin@epa.gov>]

**Sent:** Friday, August 29, 2014 1:27 PM  
**To:** Tracy A. Nagelbush  
**Subject:** RE: Gilbarco Veeder-Root

How about the 15<sup>th</sup> at 3pm?

**From:** Tracy A. Nagelbush [<mailto:tan@vnf.com>]  
**Sent:** Friday, August 29, 2014 11:03 AM  
**To:** Hengst, Benjamin  
**Subject:** RE: Gilbarco Veeder-Root

Hey Ben,

I am just checking in to see if you've had any luck with the schedule. My client is working on booking his trip and we just want to hear from you which date might be better.

Many thanks!  
Tracy

**Tracy Nagelbush | Senior Director, Governmental Issues**

**VanNess**

**Feldman** LLP

1050 Thomas Jefferson Street, NW

Washington, DC 20007

(202) 298-1937 | (202) 258-5871 cell | [tan@vnf.com](mailto:tan@vnf.com) | [vnf.com](http://vnf.com)

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**From:** Hengst, Benjamin [<mailto:Hengst.Benjamin@epa.gov>]  
**Sent:** Wednesday, August 27, 2014 9:07 PM  
**To:** Tracy A. Nagelbush  
**Subject:** RE: Gilbarco Veeder-Root

Hey Tracey -- let me check in with the team on timing and get back to you. Good seeing you, too. Ben

---

**From:** Tracy A. Nagelbush <[tan@vnf.com](mailto:tan@vnf.com)>  
**Sent:** Tuesday, August 26, 2014 1:52 PM  
**To:** Hengst, Benjamin  
**Subject:** Gilbarco Veeder-Root

Ben,

It was so nice to see you a few weeks ago with Puget. I hope you found their story not just impressive but also useful!

I have another client I would like to bring it to meet with you – this time the topic is dead center of your wheelhouse.

You may know Gilbarco Veeder-Root (GVR), a North Carolina based company that is the leading manufacturer of fuel dispensing equipment in the country. They currently hold 85% of the market domestically and approximately 50% globally. They are fuel agnostic and have dispensers necessary for all kinds of fuels including blender pumps as well as EV, LNG and CNG systems. GVR is also the leading manufacturer of air and water quality monitoring systems in the US.

We have been making the rounds on the Hill and agencies for quite some time. We haven't really gotten into the RFS conversation but I think that now is the time.

Are you available on September 15<sup>th</sup> or 16<sup>th</sup>? Our schedule is currently wide open on those two days so let me know what works best for you.

Many thanks!

**Tracy Nagelbush | Senior Director, Governmental Issues**

**VanNess**

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1050 Thomas Jefferson Street, NW

Washington, DC 20007

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**To:** Whiteman, Chad  
**From:** Hengst, Benjamin  
**Sent:** Mon 9/22/2014 3:51:15 PM  
**Subject:** FW: Discussion w/ USDA - Wed. 9/24 @ 2pm work?

**Ex. 6 - Personal Privacy**

Hi Chad--just flagging that we still need to confirm a time for the USDA meeting this week. See note below. Thanks--Ben

-----Original Message-----

From: Hengst, Benjamin  
Sent: Friday, September 19, 2014 4:26 PM  
To: 'Whiteman, Chad'  
Subject: RE: Discussion w/ USDA - Wed. 9/24 @ 2pm work?

Re: USTR, OK.

Re: USDA meeting. I meant to say the 25th. We can not do 9/24 at 11am. In fact, all of Wednesday looks pretty much impossible.

Thursday, 9/25, is pretty open. Any time between 11 am and 4pm is open. Let me know. Thanks, Ben

-----Original Message-----

From: Whiteman, Chad  
Sent: Friday, September 19, 2014 3:58 PM  
To: Hengst, Benjamin  
Subject: RE: Discussion w/ USDA - Wed. 9/24 @ 2pm work?

**Ex. 6 - Personal Privacy**

Ben,  
USDA confirmed the 24th, but not the 25th. Can you folks do the 24th at 11am?

Would like to listen in to any call with USTR on RFS as I assume it is related to a WTO issue. Can you folks pose your questions on the upcoming call with USDA? I expect several USTR staff will be on that call.

Thanks,  
Chad

-----Original Message-----

From: Hengst, Benjamin [mailto:Hengst.Benjamin@epa.gov]  
Sent: Friday, September 19, 2014 3:15 PM  
To: Whiteman, Chad  
Subject: RE: Discussion w/ USDA - Wed. 9/24 @ 2pm work?

Thanks. Let's shoot for 2pm on the 25th.

Can you tell me your POC for USTR? I need to contact them on something RFS-related. No worries if you can't. Thanks, Ben

-----Original Message-----

From: Whiteman, Chad  
Sent: Friday, September 19, 2014 10:53 AM  
To: Hengst, Benjamin  
Subject: Discussion w/ USDA - Wed. 9/24 @ 2pm work?

**Ex. 6 - Personal Privacy**

Ben,

I propose holding the next meeting with USDA at 11am on Wednesday 9/24 or alternatively at 2pm on Thursday 9/25. Do these times work for you folks? I'm checking with USDA as well.

I will make sure USTR participates in the next call. USTR has been engaged and will likely have input concerning any WTO petitions. Will you make sure your GC's office participates?

Just as a note, I will be inviting the other EOP offices as well.

Thanks,

Chad

**To:** Whiteman, Chad  
**From:** Hengst, Benjamin  
**Sent:** Fri 9/19/2014 8:25:39 PM  
**Subject:** RE: Discussion w/ USDA - Wed. 9/24 @ 2pm work?

**Ex. 6 - Personal Privacy**

Re: USTR, OK.

Re: USDA meeting. I meant to say the 25th. We can not do 9/24 at 11am. In fact, all of Wednesday looks pretty much impossible.

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**From:** Whiteman, Chad  
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**Subject:** RE: Discussion w/ USDA - Wed. 9/24 @ 2pm work?

**Ex. 6 - Personal Privacy**

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Thanks,  
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-----Original Message-----

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**Sent:** Friday, September 19, 2014 3:15 PM  
**To:** Whiteman, Chad  
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**From:** Whiteman, Chad  
**Sent:** Friday, September 19, 2014 10:53 AM  
**To:** Hengst, Benjamin  
**Subject:** Discussion w/ USDA - Wed. 9/24 @ 2pm work?

**Ex. 6 - Personal Privacy**

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I will make sure USTR participates in the next call. USTR has been engaged and will likely have input concerning any WTO petitions. Will you make sure your GC's office participates?

Just as a note, I will be inviting the other EOP offices as well.  
Thanks,

Chad

**To:** Whiteman, Chad  
**From:** Hengst, Benjamin  
**Sent:** Fri 9/19/2014 7:15:10 PM  
**Subject:** RE: Discussion w/ USDA - Wed. 9/24 @ 2pm work?

**Ex. 6 - Personal Privacy**

Thanks. Let's shoot for 2pm on the 25th.

Can you tell me your POC for USTR? I need to contact them on something RFS-related. No worries if you can't. Thanks, Ben

-----Original Message-----

**From:** Whiteman, Chad  
**Sent:** Friday, September 19, 2014 10:53 AM  
**To:** Hengst, Benjamin  
**Subject:** Discussion w/ USDA - Wed. 9/24 @ 2pm work?

**Ex. 6 - Personal Privacy**

Ben,

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Just as a note, I will be inviting the other EOP offices as well.

Thanks,  
Chad

**To:** Whiteman, Chad[**Ex. 6 - Personal Privacy**]  
**From:** Hengst, Benjamin  
**Sent:** Tue 9/9/2014 2:15:19 AM  
**Subject:** RE: Meeting with USDA

How about we pencil in next Wednesday, the 17th, at 3pm? I'll confirm with my team but I think that should work. Can you check with USDA? Thanks. Ben

---

**From:** Whiteman, Chad[**Ex. 6 - Personal Privacy**]  
**Sent:** Monday, September 8, 2014 10:46 AM  
**To:** Hengst, Benjamin  
**Subject:** RE: Meeting with USDA

Ben,

USDA would prefer having the meeting next week when Rob J. is back. Let's try to schedule for Wednesday, Thursday, or Friday. For me, Wed after 3pm is currently open and Thursday morning is open. Friday morning looks good as well.

Chad

**From:** Hengst, Benjamin [mailto:Hengst.Benjamin@epa.gov]  
**Sent:** Monday, September 08, 2014 10:21 AM  
**To:** Whiteman, Chad  
**Subject:** Re: Meeting with USDA

OK. We can do any start time between 1:30 and 5:30 (just to be clear). I don't think we could start at 5:30.

**From:** Whiteman, Chad  
**Sent:** Monday, September 8, 2014 10:19 AM  
**To:** Hengst, Benjamin  
**Subject:** RE: Meeting with USDA

I'm checking with USDA about Thursday at 1:30 or 5:30. I have also proposed holding the meeting next week as Rob J. is out all this week. I'll keep you posted.

**From:** Hengst, Benjamin [<mailto:Hengst.Benjamin@epa.gov>]  
**Sent:** Sunday, September 07, 2014 9:35 PM  
**To:** Whiteman, Chad  
**Subject:** Meeting with USDA

Chad--we are still, I believe, trying to set up a meeting on the 2014 RFS RVO rule with you and USDA.

This week, as we've discussed, is tricky due to a managers' meeting EPA is having in Ann Arbor, and due to various meetings that are occurring outside of that managers' meeting.

Mon/Tues/Weds are pretty much out of the question at this point

Can you see whether any time on Thursday between 1:30 and 5:30 would work for a meeting with USDA?

Thanks,

Ben

**To:** Whiteman, Chad  
**From:** Hengst, Benjamin  
**Sent:** Mon 9/8/2014 7:07:22 PM  
**Subject:** Re: Meeting with USDA

**Ex. 6 - Personal Privacy**

OK, I will get back to you with a time. Ben



Ben,

USDA would prefer having the meeting next week when Rob J. is back. Let's try to schedule for Wednesday, Thursday, or Friday. For me, Wed after 3pm is currently open and Thursday morning is open. Friday morning looks good as well.

Chad

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**Subject:** Re: Meeting with USDA

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**Sent:** Monday, September 8, 2014 10:19 AM

**To:** Hengst, Benjamin

**Subject:** RE: Meeting with USDA

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**Sent:** Sunday, September 07, 2014 9:35 PM  
**To:** Whiteman, Chad  
**Subject:** Meeting with USDA

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Mon/Tues/Weds are pretty much out of the question at this point

Can you see whether any time on Thursday between 1:30 and 5:30 would work for a meeting with USDA?

Thanks,

Ben

**To:** Chad Whiteman

**Cc:** Jutras, Nathaniel[Jutras.Nathaniel@epa.gov]; Nagelhout, Peter[Nagelhout.Peter@epa.gov]; Argyropoulos, Paul[Argyropoulos.Paul@epa.gov]

**From:** Hengst, Benjamin

**Sent:** Mon 9/8/2014 3:05:39 PM

**Subject:** Draft technical memos, 2014 RFS RVO final rule

[E85 Consumption in 2013 Memo - Draft.pdf](#)

[Memo to docket on E0 sold at marinas - Draft.pdf](#)

[Memo to docket on E15 consumption in 2014 - Draft.pdf](#)

[Memo to docket on E85 station counts - Draft.pdf](#)

[Memo to docket on E85 versus price correlations - Draft.pdf](#)

Chad, please see attached memos, which are referenced in the final rule preamble. We will be sending one more in the next day or so. Thanks, Ben

## MEMORANDUM

Subject: Estimating E85 Consumption in 2013

From: Dallas Burkholder

To: EPA Air Docket EPA-HQ-OAR-2013-0479

To aid our efforts to project the amount of E85 that could be consumed in the United States in 2014, we first attempted to estimate E85 consumption in 2013. There is no single comprehensive and authoritative report produced by the United States government of E85 supply. EIA does collect data on E85 production from refiners, large blenders, and ethanol production facilities. In 2013 the total production of E85 reported to EIA was 76 million gallons.<sup>1</sup> This data, however, is likely to under-estimate the actual production of E85 as it does not capture E85 produced at small terminals or by blenders that do not meet their reporting thresholds. It also likely does not reflect volumes of E85 created using reformulated blendstocks or natural gasoline as the petroleum component of the E85.

Despite the lack of information on E85 production on a nationwide scale, there are several states that keep records of E85 consumption. This is generally done for tax purposes, as some states offer tax incentives for the sale of E85 or tax the renewable content of transportation fuels at different rates than the petroleum based components. EPA was able to acquire monthly sales records for five states in 2013: Minnesota, California, Iowa<sup>2</sup>, New York, Kansas. These three states account for 790 of the 2615 reported E85 stations at the end of 2013. EPA was also able to determine the number of stations offering E85 in each of these states. This information is presented in the Table 1 below.

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<sup>1</sup> Letter from John Conti, Assistant Administrator for Energy Analysis, EIA to Chris Grundler, Office of Transportation and Air Quality Director. May 14, 2014

<sup>2</sup> Information for E85 sales in Iowa was only available on a quarterly, rather than a monthly basis. For the purposes of this analysis the quarterly volume was distributed evenly between the three months of the quarter.

Table 1  
Monthly E85 Station Counts and Sales Volumes for 2013

Month	Minnesota			California			Iowa			New York			Kansas		
	Volume	Stations	Station Average	Volume	Stations	Station Average	Volume	Stations	Station Average	Volume	Stations	Station Average	Volume	Stations	Station Average
Jan-13	561,119	353	1,590	556,862	134	4,156	611,649	185	3,306	541,209	83	6521	43011	32	1,344
Feb-13	558,286	351	1,591	587,394	136	4,319	611,649	185	3,306	556,828	83	6709	56969	32	1,780
Mar-13	736,629	350	2,105	734,435	137	5,361	611,649	185	3,306	656,002	83	7904	69454	32	2,170
Apr-13	707,448	346	2,045	651,514	139	4,687	874,650	185	4,728	592,750	83	7142	59047	32	1,845
May-13	823,068	348	2,365	747,752	140	5,341	874,650	185	4,728	629,470	83	7584	73596	32	2,300
Jun-13	1,516,751	349	4,346	742,130	141	5,263	874,650	185	4,728	606,074	83	7302	69177	32	2,162
Jul-13	1,332,764	349	3,819	731,997	142	5,155	1,203,632	185	6,506	523,867	83	6312	61153	32	1,911
Aug-13	1,415,664	349	4,056	799,516	143	5,591	1,203,632	185	6,506	623,550	83	7513	65557	32	2,049
Sep-13	1,484,826	350	4,242	775,286	143	5,427	1,203,632	185	6,506	610,161	83	7351	51049	32	1,595
Oct-13	1,479,898	351	4,216	839,385	143	5,870	928108.7	185	5,017	624,313	83	7522	49668	32	1,552
Nov-13	1,359,508	349	3,895	781,249	143	5,463	928108.7	185	5,017	600,933	83	7240	50720	32	1,585
Dec-13	1,078,148	351	3,072	848,948	143	5,937	928108.7	185	5,017	560,083	83	6748	56512	32	1,766

Table 2  
Data Sources for Monthly E85 Station Counts and Sales Volumes for 2013

	E85 Sales Volume	E85 Stations Count
Minnesota	Minnesota Department of Revenue	Minnesota Department of Commerce
California	California Air Resource Board	California Air Resource Board
Iowa	Iowa Department of Revenue	DOE Alternative Fuels Data Center
New York	New York State Department of Taxation and Finance	DOE Alternative Fuels Data Center
Kansas	Kansas Department of Revenue	DOE Alternative Fuels Data Center

EPA used the information presented in Table 1 above to calculate a volume weighted average for the volume of E85 sold per station for each month in 2013. This was done by dividing the sum of all E85 sales for each month by the total number of E85 stations in operation in the five states for that month. This monthly weighted average was then multiplied by 2615, the average number of E85 stations in the United States in 2013 according to the DOE Alternative Fuels Data Center, to estimate the volume of E85 sold in the United States in 2013 in each month. The results of these calculations are shown in Table 3 below.

Table 3  
Weighted Average of Monthly E85 Sales and Estimated Monthly Total Sales

	Average E85 Sales Per Station (gallons)	Estiamted Total Sales in the US (2615 Stations)
Jan-13	2,940	7,688,333
Feb-13	3,013	7,878,646
Mar-13	3,568	9,330,828
Apr-13	3,676	9,611,903
May-13	3,996	10,448,504
Jun-13	4,821	12,607,549
Jul-13	4,872	12,739,158
Aug-13	5,187	13,563,393
Sep-13	5,202	13,602,464
Oct-13	4,939	12,914,848
Nov-13	4,698	12,284,288
Dec-13	4,373	11,434,202
Total	4,274	134,104,116

## MEMORANDUM

Subject: Estimating E0 Volume Sold in the U.S. at marinas

From: Lester Wyborny, U.S. EPA, Office of Transportation and Air Quality

To: EPA Air Docket EPA-HQ-OAR-2013-0479

Stakeholders have communicated to the EPA that various entities make non-ethanol blended gasoline (E0) for sale at marinas. EPA has also heard from stakeholders that many marinas receive requests from boat owners for E0 gasoline, and in many cases, the local suppliers try to satisfy the boat owners' requests. Because EPA was unable to find a direct estimate, publicly available or otherwise, of the volume of E0 sold at marinas, we conducted an analysis to estimate E0 sold at marinas for purposes of the final rulemaking setting the applicable standards for 2014 under the RFS program.

A number of U.S. marinas are represented by the Association of Marina Industries (AMI). According to AMI's website ([marinaassociation.org/](http://marinaassociation.org/)), AMI represents several hundred marinas, boatyards, yacht clubs, public/private mooring basins, partner associations and marine industry vendors and suppliers across the U.S. and the world. The AMI webpage also states that 38 million gallons of fuel was sold from the marinas they represent in 2010.

In discussions with representatives from AMI, we were told that AMI represents 500 marinas in the U.S. and many of those marinas sell fuel, although some do not. The 38 million gallons of fuel sold at the marinas they represent includes both gasoline and diesel fuel, but the AMI did not know how much of each. Also, the 38 million gallon figure reported by AMI is the result of a survey, and AMI did not know what fraction of total fuels sales at their marinas the 38 million gallons represents, because some marinas don't respond to the survey even though they sell fuel. We asked AMI if there was a way for them to estimate the volume of gasoline sold at its marinas and AMI did not believe that there was any way to do that from the data that they had on hand. AMI referred us to ValvTect, a company which markets additives for marine fuel at the AMI member marinas.

According to ValvTect, the company produces additives particularly designed to be blended into marine gasoline and diesel fuel. Their additives help to prevent corrosion, stabilize the fuels, provide some detergent qualities and help to control the effects of moisture, thus allowing the use of ethanol-blended gasoline by boats if that is the fuel available. Their additives are blended into the E0 and ethanol-blended fuels used at 640 marinas across the US, out of the estimated 3000 marinas which sell fuels. At the marinas which use their additives, both gasoline and diesel fuel are marketed, and some sell only a small amount of fuel, and others sell a significant amount of fuel. ValvTect believes that the marinas at which their additives are used tend to be somewhat representative of the marinas in the U.S. and ValvTect estimated the volume of gasoline sold at those marinas is 50 million gallons per year. ValvTect could not provide an estimate of the total volume of gasoline sold at all US marinas. We estimated the total gasoline sold at all marinas by applying a ratio of 3000 to 640 to the estimated 50 million gallons of gasoline sold at the marinas that ValvTect sells its marine gasoline additives. Based

on this methodology, we estimate that the total volume of marine gasoline sold in the U.S. is on the order of 248 million gallons.

In response to our questions regarding the amount of marine gasoline sold as E0, ValvTect replied that not all gasoline sold at marinas is E0. Marine gasoline is likely to contain ethanol when only gasoline blendstocks are available in the area, such as renewable blendstocks for oxygenate blending (RBOB) or conventional blendstock for oxygenate blending (CBOB). Conversely, finished gasoline which receives a 1 psi waiver and is simply splash blended with ethanol could be sold as E0. Based on this information from ValvTect, we estimated the fraction of marine gasoline which is E0 versus E10.

Available data is not sufficient to indicate the volume of marine gasoline sold in RFG areas nor the volume sold in the states with RFG areas. We estimated the volume of marine gasoline sold in each state based on the number of marinas in each state. Marinas.com provides the number of marinas in each state, which we summarized in the table below. For some states, information is not provided for the number of marinas and the website uses the term “under construction” (UC) to indicate this. It is likely that for most of these states, there are very few marinas in the entire state, or perhaps none, because they are states without a coastline and contain few lakes. The exception to this is Alaska which has a very long coastline, although a very small population. Counting only those states for which Marinas.com provides a value, there are a total of 6,301 marinas in the U.S.

To estimate the volume of marine gasoline which is E10 versus E0, we added up the number of marinas in predominantly Reformulated Gasoline (RFG) states, which includes California, Connecticut, Delaware, District of Columbia, Maryland, Massachusetts, New Jersey, New York, and Rhode Island. A substantial volume of conventional gasoline is sold in New York, however, this is offset by the many other states which have RFG areas, including Arizona, Georgia, Illinois, Indiana, Kentucky, Louisiana, New Hampshire, Pennsylvania, Texas and Wisconsin. However, the RFG volume is either small relative to the total gasoline sold in these states, or these states have a fewer number of marinas. Using this method, we estimate that the volume of marine gasoline in predominantly RFG states is about half of the total marine gasoline sold. Thus, the volume of E0 is estimated to be about half of the estimated 248 million gallons of marine gasoline sold in the U.S., which we calculated to be 124 million gallons.

Estimated number of Marinas by State*			
State	# of Marinas	State	# of Marinas
Alabama	35	Montana	UC
Alaska	UC	Nebraska	UC
Arizona	1	Nevada	UC
Arkansas	2	New Hampshire	15
California	468	New Jersey	438
Colorado	1	New Mexico	UC
Connecticut	255	New York	900
Delaware	21	North Carolina	128
Dist. of Columbia	6	North Dakota	UC
Florida	970	Ohio	243
Georgia	33	Oklahoma	1
Hawaii	19	Oregon	57
Idaho	1	Pennsylvania	33
Illinois	74	Rhode Island	153
Indiana	12	South Carolina	65
Iowa	UC	South Dakota	UC
Kansas	UC	Tennessee	27
Kentucky	34	Texas	67
Louisiana	19	Utah	UC
Maine	277	Vermont	34
Maryland	428	Virginia	185
Massachusetts	394	Washington	303
Michigan	414	West Virginia	UC
Minnesota	11	Wisconsin	151
Mississippi	18	Wyoming	UC
Missouri	8		

\*The term UC means “under construction” meaning that data collection is incomplete

## MEMORANDUM

Subject: Projection of potential E15 consumption in 2014 and its impacts on total ethanol consumption

From: David Korotney, U.S. EPA, Office of Transportation and Air Quality

To: EPA Air Docket EPA-HQ-OAR-2013-0479

In the context of estimating the total volume of ethanol that can be produced and consumed in 2014 for purposes of setting the applicable volume requirement for total renewable fuel under the RFS program, we have estimated the contribution that consumption of E15 can make to total ethanol.

According to the national E15 compliance survey there were 63 stations that operated blender pumps selling E15 as of February, 2014. This number is expected to grow throughout 2014. For instance, MAPCO has indicated that it intends to offer E15 at 100 of its stations, though it is unclear how many will be installed in 2014.<sup>1</sup> For the purposes of this analysis we have assumed that 100 stations will offer E15 in 2014. This number could, for instance, represent a rampup of about 10 new E15 stations per month between March and December 2014. While there would be a total of 163 E15 stations by December 2014, some stations would only be operational for part of the year. The average number of stations in operation for all of 2014 would be about 100 in this scenario.

The number of all retail stations selling fuel in the U.S. has been in steady decline over the last decade. Using station counts from the National Petroleum News, this trend can be projected into the future. On this basis, the projected number of service stations in 2014 will be 153,488.

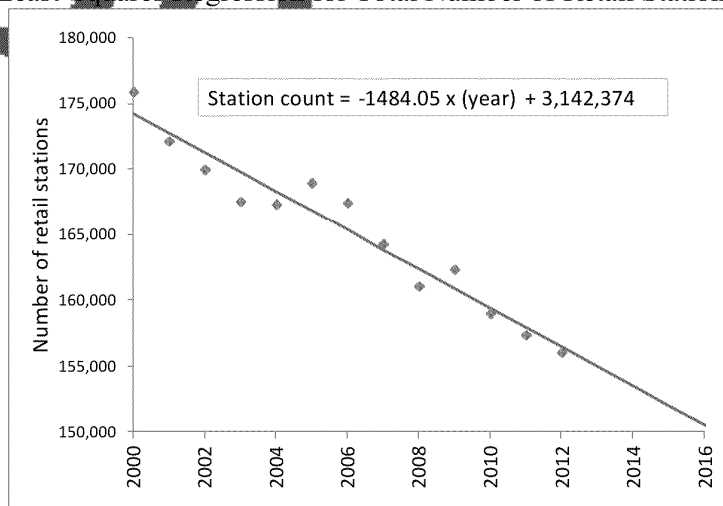
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<sup>1</sup> [http://www.businesswire.com/news/home/20140115005879/en/MAPCO-offer-E15-Customers-2014#.UuKJJ\\_tOm00](http://www.businesswire.com/news/home/20140115005879/en/MAPCO-offer-E15-Customers-2014#.UuKJJ_tOm00)

Table 1  
Total Number of Retail Stations  
(Source: National Petroleum News "2012 Market Facts")

2000	175,941
2001	172,169
2002	170,018
2003	167,571
2004	167,346
2005	168,987
2006	167,476
2007	164,292
2008	161,068
2009	162,350
2010	159,006
2011	157,393
2012	156,065

Figure 1  
Least-Squares Regression for Total Number of Retail Stations



Therefore, the fraction of retail stations selling E15 in 2014 is projected to be 0.065%.

$$100 \text{ E15 stations} / 153,488 \text{ retail stations} = 0.065\%$$

A simplified estimate of the volume of E15 that might be sold in 2014 would use the per-station sales rate for E10 as a substitute. Given that in 2014 about 134 bill gal of gasoline is expected to be sold through 153,488 stations, the average station is projected to sell about 870,000 gallons of E10 in 2014. If stations offering E15 sell it at this same rate, a total of 87 mill

gal of E15 could be sold in 2014 ( $870,000 \times 100$  stations). However, an estimate of 87 mill gal of E15 for 2014 is likely to be an overprojection for the following reasons:

- Stations offering E15 are unlikely to do so to the exclusion of E10. That is, it would be unreasonable to expect that a retail station selling E15 would not also sell E10. The purpose of blender pumps is to provide customers with a choice, and even those whose vehicles can use E15 would not be expected to use E15 100% of the time. As a result, E15 sales at those stations offering E15 are likely to be less than 870,000 gal per year per station.
- While all 2001 and newer model year vehicles are legally permitted to use E15, most of them were not designed by manufacturers with the expectation that they might operate on E15. Manufacturers have only recently begun adding E15 to the list of fuels covered by their vehicle warranties. Absent the explicit inclusion of E15 to the warranty, vehicle owners may be reluctant to use E15 even if legally permitted to do so.

Since only model years 2012 - 2014 have been explicitly warranted to use E15 (and in fact not all models within these model years), it may be that vehicles manufactured prior to 2012 do not use E15 at all. Model years 2012 - 2014 comprise about 22% of all the vehicles in the 2014 in-use fleet.

While we are not able at this time to quantitatively estimate the impact of these factors on E15 sales for 2014, it seems clear that together they could result in more than a 50% reduction in the maximum of 87 mill gal that we estimated above. For the purposes of estimating potential E15 sales in 2014, then, a projection of 40 mill gal appears to be reasonable.

## MEMORANDUM

Subject: Projection of the number of retail stations offering E85 in 2014

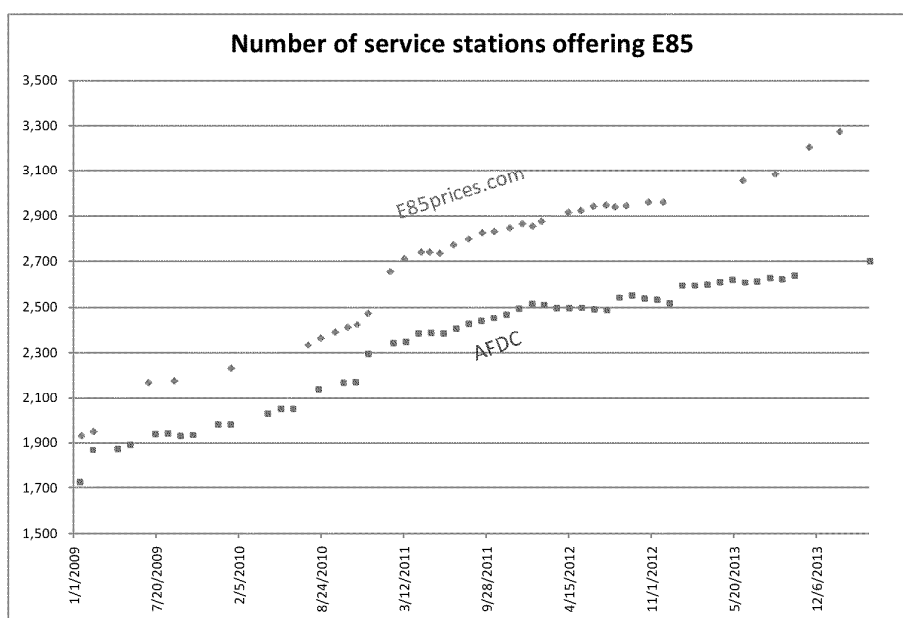
From: David Korotney, U.S. EPA, Office of Transportation and Air Quality

To: EPA Air Docket EPA-HQ-OAR-2013-0479

One of the components of EPA's projections of the volume of E85 that can be consumed in a given year is the number of retail stations that are expected to offer E85. To this end, we have evaluated two sources of information on E85 stations:

- DOE's Alternative Fuels Data Center ([www.afdc.energy.gov/locator/stations/](http://www.afdc.energy.gov/locator/stations/))
- E85prices.com

Historical data from the Alternative Fuels Data Center (AFDC) was provided by the Clean Cities Technical Response Service, and included E85 station counts by state and month for the period June 2007 through April 2014.<sup>1</sup> Historical data from E85prices.com was derived through a web archival service (<http://archive.org/web/>). The nationwide E85 station counts from both sources are shown below for the period January 2009 - April 2014.

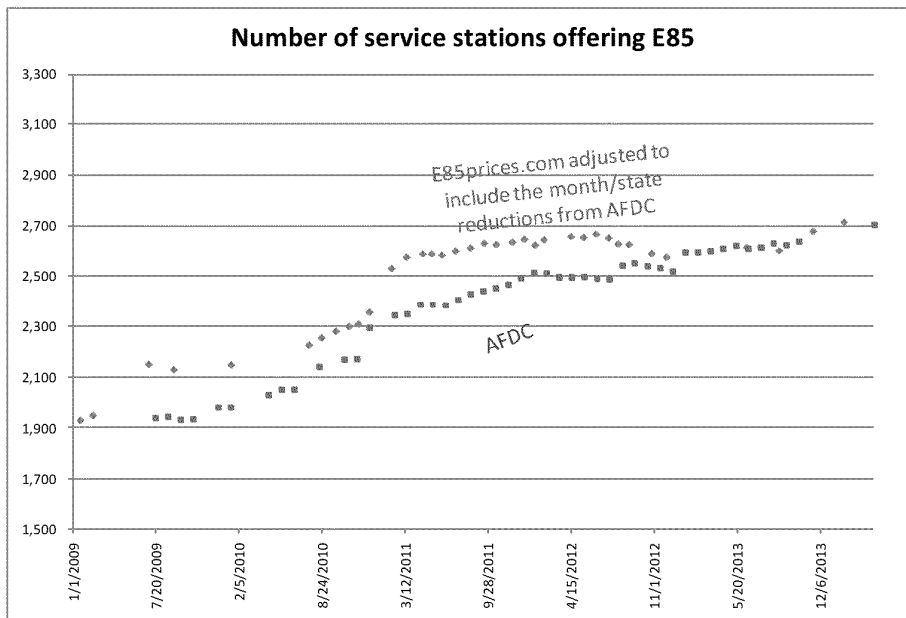


The disparity between the two sets of E85 station counts can be traced to differences in the purposes of the two databases:

<sup>1</sup> The nationwide E85 station count was also available through August 2014 from the AFDC website, but this data did not include station counts by state.

- E85prices.com is a decentralized forum for users to record E85 and gasoline prices at specific retail stations. There does not appear to be any ongoing management of the database by a single person or group to verify that a retail station offering E85 should remain in the database long after the last price data for that station is recorded.
- The AFDC database is a centralized database that includes periodic reviews to ensure that the information it contains is accurate. It is clear from the data provided on E85 station counts by month and state that the E85 stations included in the AFDC database fluctuated up and down over time, presumably reflecting deletions as well as additions to the database.

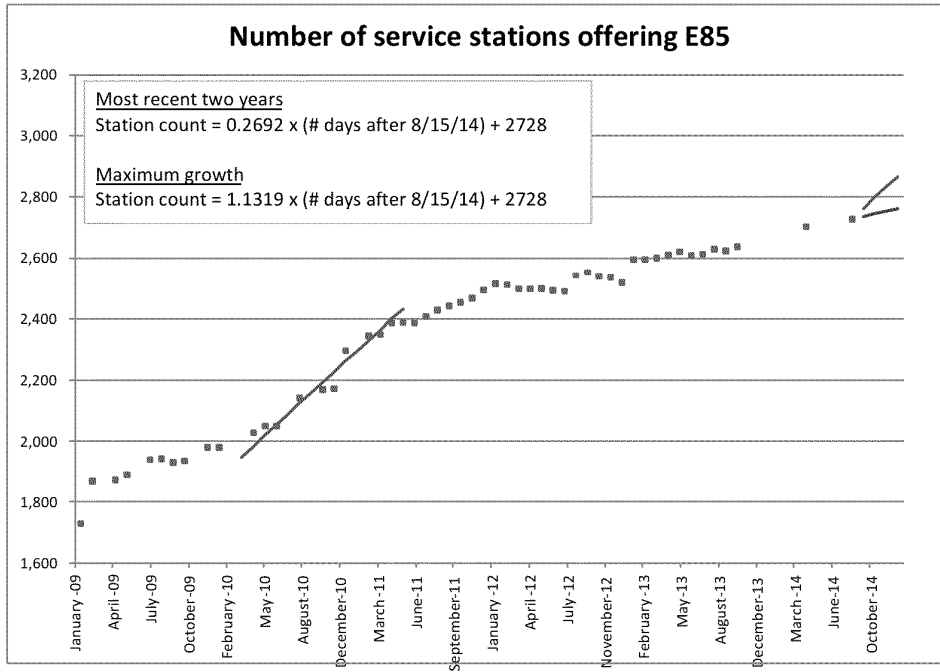
The E85prices.com database is likely to include all stations that have ever offered E85 rather than those stations that currently offer E85. As a result, the data from AFDC is likely to more accurately reflect the number of stations currently offering E85. To evaluate this assumption, we adjusted the data from E85prices.com to include those occasions wherein the number of E85 stations in a given state declined from one month to the next according to the AFDC data. The result was that the E85prices.com data converges with the AFDC data.



Based on this analysis, the AFDC database appears to provide a more accurate basis from which to project E85 station counts into the future.

We used a least-squares regression of the available data to extrapolate beyond the most recent data point available in the AFDC database, which is August 2014. If the regression is based on data from the most recent two years, the total number of E85 stations would be projected to reach 2,761 by the end of 2014. However, it is possible for E85 stations to grow at a higher rate as evidenced by the maximum growth rate exhibited in the AFDC data (June 2010

through March 2011). Given that the RFS program is intended to promote growth in the use of renewable fuels, it may be appropriate to use the highest historical growth rate which is demonstrably achievable under appropriate conditions. Using the maximum growth rate, the total number of E85 stations would be projected to reach 2,866 by the end of 2014.



For the purposes of projecting the volume of E85 that could be consumed in 2014, we must account for the fact that the number of stations offering E85 changes throughout the year. We can interpolate the number of E85 stations for each of the months in 2014 for which data is not available from AFDC, and then use the least-squares regression to project the monthly E85 station count for the last four months of 2014. The results are shown below, along with the annual average E85 station count.

DRAFT

January	2672
February	2682
March	2693
April	2704
May	2710
June	2716
July	2722
August	2728
September	2762
October	2797
November	2831
December	2866
Annual average	2740

DRAFT

## **Appendix - E85 Station Counts from DOE's Alternative Fuel Data Center**

## MEMORANDUM

Subject: Correlating E85 consumption volumes with E85 price

From: David Korotney, U.S. EPA, Office of Transportation and Air Quality

To: EPA Air Docket EPA-HQ-OAR-2013-0479

In order to project volumes of E85 that could be consumed in the future, we analyzed data on historical sales of E85 and correlated those sales with the percentage reduction in the E85 retail price relative to E10 price. We procured E85 sales volumes from five states: Minnesota, Iowa, North Dakota, Kansas, and New York. We combined the data from all five states to create correlations that were intended to reflect the nation as a whole. We were also provided data covering multiple states from the National Association of Convenience Stores. In addition, we were provided with some limited sets of proprietary data from individual companies that while too limited in scope for making national projections, provided further support for the trends seen in the publicly available data..

### *A. Use of Price Data from E85prices.com*

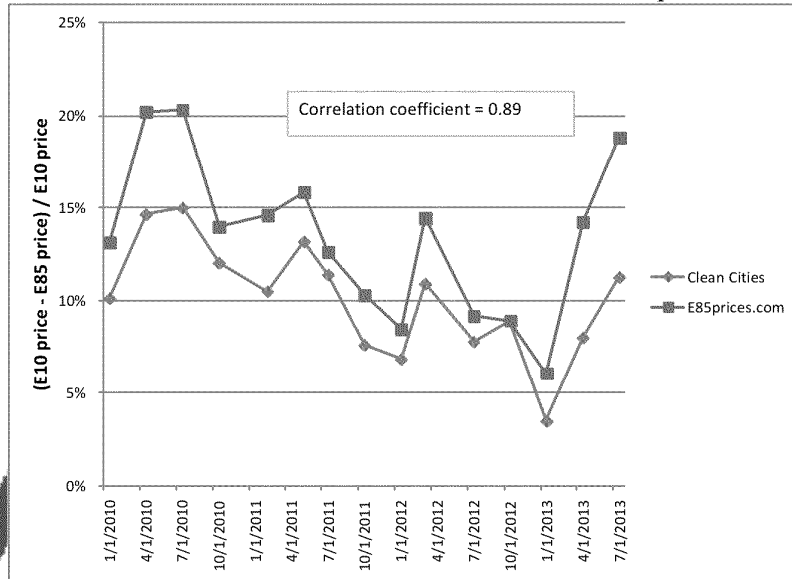
Most of the E85 sales volume data from individual states did not include information on E85 or E10 prices, and was in the form of monthly totals/averages. As a result, we needed an alternative data source for E85 prices. The most complete publicly available source of data on retail prices of E85 and E10 is the website E85prices.com. This is the source that we used for E85 and E10 prices for all the analyses discussed in this memorandum. Data provided by the Minnesota Department of Commerce did include both E85 volumes and E85 prices for individual retail stations, but we determined that it would not be appropriate to use it since it covered a shorter timeframe than E85 sales volume data provided by the Minnesota Department of Revenue. For development of our primary correlations between E85 price and E85 sales volumes for Minnesota, therefore, we used the dataset from the Minnesota Department of Revenue (coupled with price data from E85prices.com) covering a longer timeframe. However, we also analyzed the station-specific dataset from the Minnesota Department of Commerce separately to determine how it might influence the correlations between E85 price and E85 sales volumes for the nation as a whole. These analyses are discussed separately in Section J.

In order to verify that the E85 price data from E85prices.com was reasonably accurate and appropriate to pair with E85 sales volume data from the states, we compared it to several other sources of data on retail fuel prices as shown in Figures 1 and 2.<sup>1</sup>

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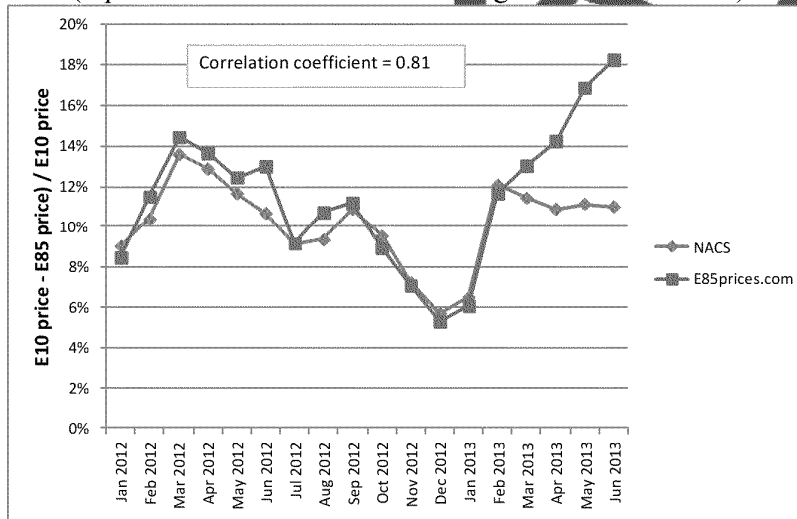
<sup>1</sup> Another proprietary data set from an E85 distributor in California demonstrated a correlation coefficient of 0.58 in comparison to data from E85prices.com, demonstrating a reasonably close correlation between the two.

Figure 1  
Comparison of E85prices.com to Retail Price Data from  
EERE's Clean Cities Alternative Fuel Price Report



Source: <http://www.afdc.energy.gov/fuels/prices.html>

Figure 2  
Comparison of E85prices.com to Retail Price Data from  
National Association of Convenience Stores  
(represents 298 retail stations selling E85 over 19 states)



With regard to the larger disparity between data sources shown in Figure 2 for 2013, a representative from NACS suggested that this may be the effect of retailers at the particular locations included in the NACS survey who are able to blend their own E85 and thus benefit

from RIN values, passing less of the value of those RINs along to customers. The retail stations surveyed by NACS are typically the more innovative and larger firms who have the ability to capitalize on such market opportunities. As such, they may not be representative of all retail stations that offer E85.

Based on these comparisons, we believe that price data from E85prices.com is reasonably accurate, and can be paired with E85 sales volumes from the five states to permit us to correlate E85 volume and price. Nevertheless, we acknowledge that this approach may include some bias in that the average E85 prices for individual states from E85prices.com have not been weighted by the volume of E85 sold at the stations where the price data was collected. This could have the effect of muting the apparent consumer responses to greater reductions in E85 price, since the stations with greater E85 sales volumes would also likely be the stations where E85 prices are lowest. The additional analysis of station-specific data from the Minnesota Department of Commerce, which include E85 price data, allowed us to investigate this issue more fully. See Section J for more details.

#### *B. Overview of Approach*

The data for each of the five states represented total E85 sales in that state, by quarter or by month. The raw data provided to EPA by each state is provided in the appendix.

The first step was to subtract out E85 sales to government fleet flex-fuel vehicles (FFVs) in each state, based on the expectation that such FFVs are generally required to use E85 whenever it is available, regardless of price. The only exception to this step was for Kansas wherein the impact of government fleets had already been subtracted out of the E85 sales data provided to EPA. Consumption of E85 by government fleets was provided by the Office of Governmentwide Policy at the General Services Administration and is included in the appendix.

We used two different approaches to correlate E85 sales with E85 price reduction in comparison to E10 price. The first was a per station analysis in which the total volume of E85 sold in a given state in a given month was divided by the total number of retail stations offering E85 in that same state and month. Data on the number of retail stations offering E85 was provided by DOE's Alternative Fuel Data Center (AFDC) and is provided in the appendix. Further discussion of the number of retail stations offering E85 can be found in a separate memorandum, including projections of the number of E85 stations in 2014.<sup>2</sup>

Since the per station approach does not account for variations in the number of FFVs in a given state over time, nor the geographic distribution of those FFVs in comparison to the location of the stations offering E85, we also conducted a more comprehensive analysis to

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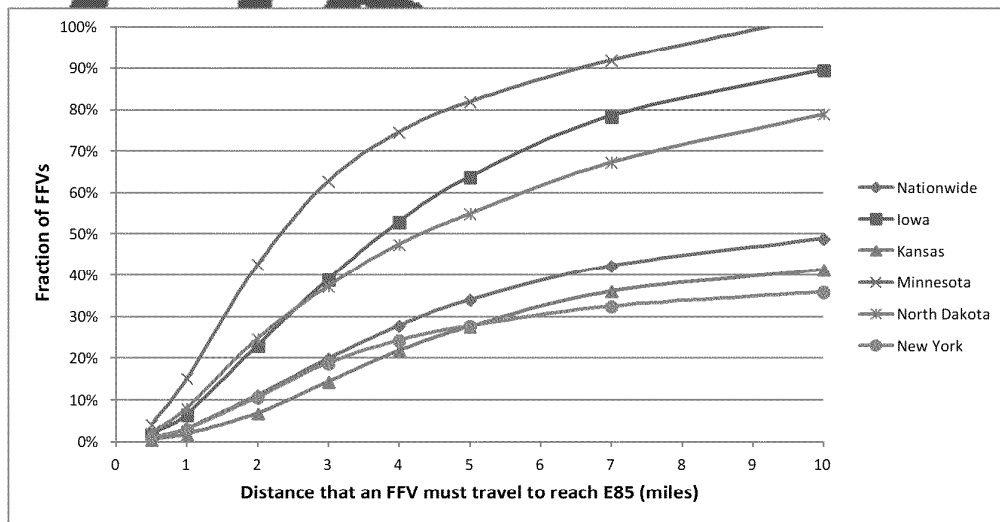
<sup>2</sup> "Projection of the number of retail stations offering E85 in 2014," memorandum from David Korotney to EPA Air Docket EPA-HQ-OAR-2013-0479. Note that disputes over the reliability of E85 station counts from AFDC versus those from E85prices.com would have little impact on the final per-station correlations in this memorandum because the impacts of dividing statewide E85 volumes by the number of E85 stations, and then subsequently multiplying the resulting correlations by the nationwide number of E85 stations, would tend to produce final correlations largely independent of the total number of E85 stations.

account for these factors. This analysis required that we estimate the degree to which FFVs in each state had access to E85. To this end, we estimated the number of FFVs and the number of E85 stations by zip code, month, and year.

At the time of this analysis, we did not have information on FFV registrations by geographic location. Therefore, we used population in each zip code as a surrogate for the concentration of FFVs in each zip code. Total number of FFVs in the U.S. was taken from EIA's Annual Energy Outlook 2014, and population data by zip code was taken from the Census Bureau. Results for each state are provided in the Appendix.

The estimates of the number of FFVs in each zip code were paired with the number of retail stations offering E85 in each zip code. E85 station locations were identified by latitude and longitude provided by AFDC, while all FFVs within a zip code were assumed to be located at the geographic center of that zip code. We could then calculate the number of FFVs located within a specified distance from any E85 station within a state. The results of this analysis for 2013 are shown below.

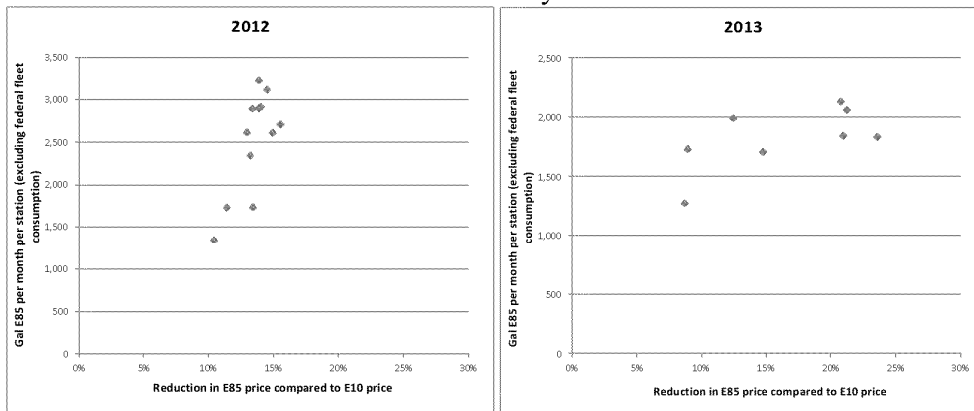
Figure 3  
Fraction of FFVs That Had Access to E85 in 2013



For the purposes of correlating gallons of E85 consumed per month per FFV that has access to E85 with the price of E85 relative to the price of E10, we chose to use the 4 mile distance from Figure 4. While the choice of travel distance does have a significant impact on the E85 consumed per month per FFV with access to E85 for each of the five states we analyzed, it has little impact on the extrapolation of those impacts to the rest of the nation. This is due to the fact that the same assumed travel distance for an FFV to reach E85 must be used both in estimating the E85 consumed per month per FFV for each of the five states and in estimating the number of FFVs with access to E85 for the nation as a whole. The result is that these two factors nearly cancel one another when the state-specific correlations are applied to the nation as a whole.

Preliminary correlations between E85 sales and the E85 price reduction in comparison to E10 price indicated that most of the state-specific data exhibited different correlations in different years. Figure 4 demonstrates this result for the Kansas data.

Figure 4  
Kansas Data by Year



It is beyond the scope of this analysis to determine the causes for such year-to-year differences in consumer responses to E85 price reductions. Given this, the best representation of the data would be correlations whose overall slopes are weighted averages of the slopes for individual years. To this end, we included dummy variables in the least-squares regression analyses to represent years. The inclusion of dummy variables has the effect of producing individual y-intercepts for the data generated in each year, but a single slope representing the data generated in all years. Following the least-squares regression, we replaced the multiple intercepts representing individual years with a single intercept that forced the correlation to pass through the center of the data cloud.

Theoretically, we would expect that the correlations between E85 sales and E85 price would be non-linear, with poor consumer response to E85 price reductions when E85 prices remain below energy parity in comparison to E10, and more dramatic consumer response to E85 price reductions when E85 prices are near or above energy parity. However, the available data did not exhibit this effect in any obvious way. Thus we used linear correlations for all datasets.

### C. Correlations for Minnesota

$$\text{Gallons of E85 per month per station offering E85} = 18260 \times (\% \text{ reduction in E85 price compared to E10 price}) \quad [\text{Eq. 1}]$$

$$\text{Gallons of E85 per month per FFV with access to E85} = 44.34 \times (\% \text{ reduction in E85 price compared to E10 price}) + 1.309 \quad [\text{Eq. 2}]$$

Figure 5  
Minnesota Per Station Analysis ( $r^2 = 0.54$ )

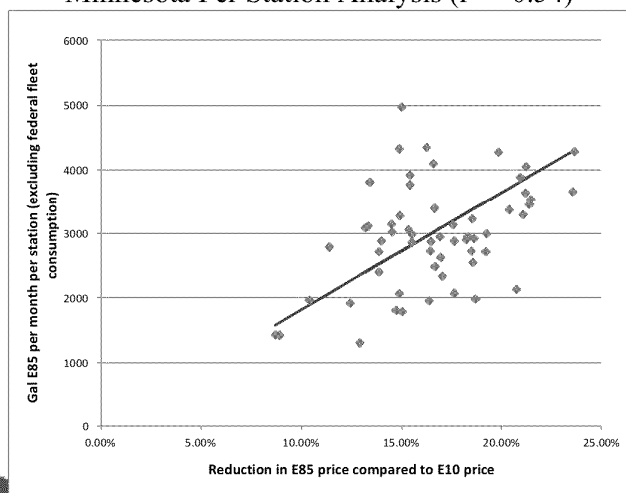
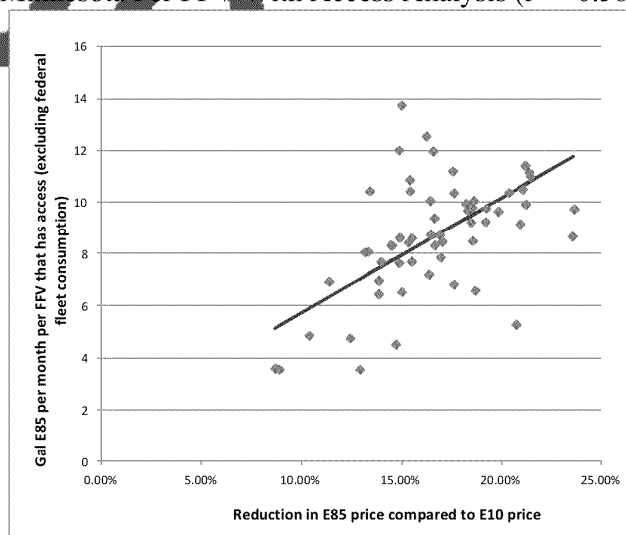


Figure 6  
Minnesota Per FFV With Access Analysis ( $r^2 = 0.58$ )



For the per station analysis of the Minnesota data, the y-intercept for the curve passing through the center of the data cloud was calculated to be -48.55 gal per month per station. The use of a negative y-intercept would mean that at small E85 price reductions, the volume of E85 would be negative. Since this result is nonsensical, we corrected the per station correlation to have a zero y-intercept. This correction has a very small impact on the correlation's predictions.

#### D. Correlations for Iowa

Gallons of E85 per month per station offering E85 =

$$16310 \times (\% \text{ reduction in E85 price compared to E10 price}) + 1837 \quad [\text{Eq. 3}]$$

$$\begin{aligned} &\text{Gallons of E85 per month per FFV with access to E85} = \\ &59.17 \times (\% \text{ reduction in E85 price compared to E10 price}) + 5.655 \quad [\text{Eq. 4}] \end{aligned}$$

Figure 7  
Iowa Per Station Analysis ( $r^2 = 0.67$ )

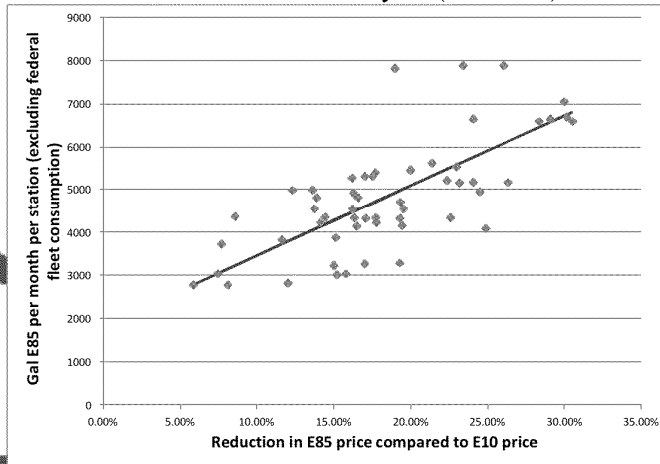
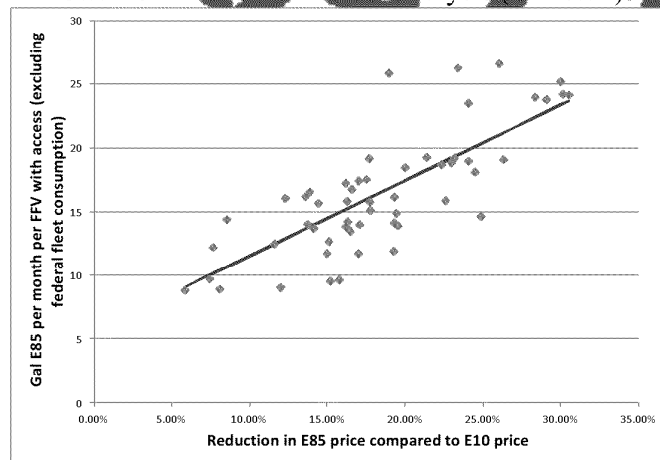


Figure 8  
Iowa Per FFV With Access Analysis ( $r^2 = 0.72$ )



Note that data provided by the Iowa Department of Revenue was for quarters rather than months. For the purposes of our analysis, we estimated the monthly volumes by dividing each quarter's volume by three. This allowed us to pair monthly volumes with monthly estimates of E85 price reductions from E85prices.com.

#### E. Correlations for North Dakota

$$\text{Gallons of E85 per month per station offering E85} = 3081 \times (\% \text{ reduction in E85 price compared to E10 price}) + 373.5 \quad [\text{Eq. 5}]$$

$$\text{Gallons of E85 per month per FFV with access to E85} = 16.37 \times (\% \text{ reduction in E85 price compared to E10 price}) + 2.846 \quad [\text{Eq. 6}]$$

Figure 9  
North Dakota Per Station Analysis ( $r^2 = 0.77$ )

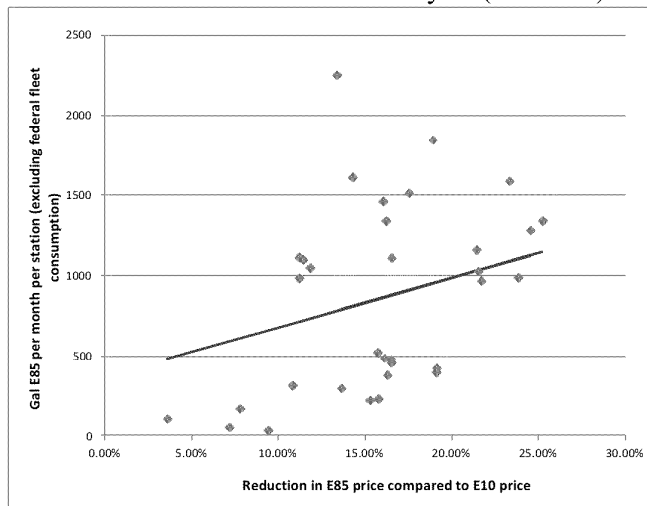
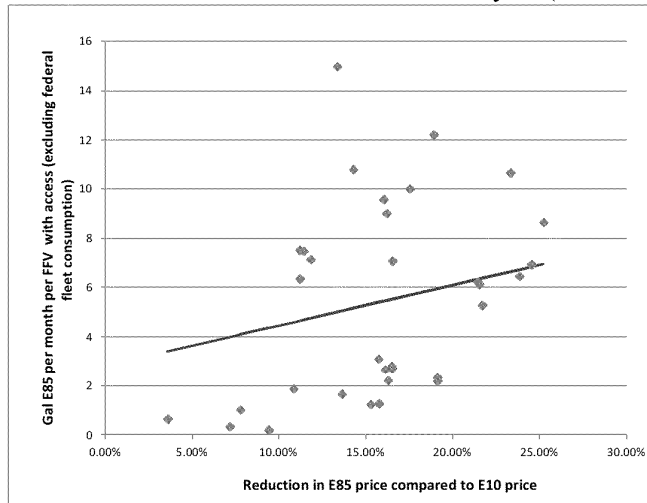


Figure 10  
North Dakota Per FFV With Access Analysis ( $r^2 = 0.78$ )



F. *Correlations for Kansas*

$$\text{Gallons of E85 per month per station offering E85} = 5233 \times (\% \text{ reduction in E85 price compared to E10 price}) + 1479 \quad [\text{Eq. 7}]$$

$$\text{Gallons of E85 per month per FFV with access to E85} = 8.171 \times (\% \text{ reduction in E85 price compared to E10 price}) + 2.504 \quad [\text{Eq. 8}]$$

Figure 11  
Kansas Per Station Analysis ( $r^2 = 0.44$ )

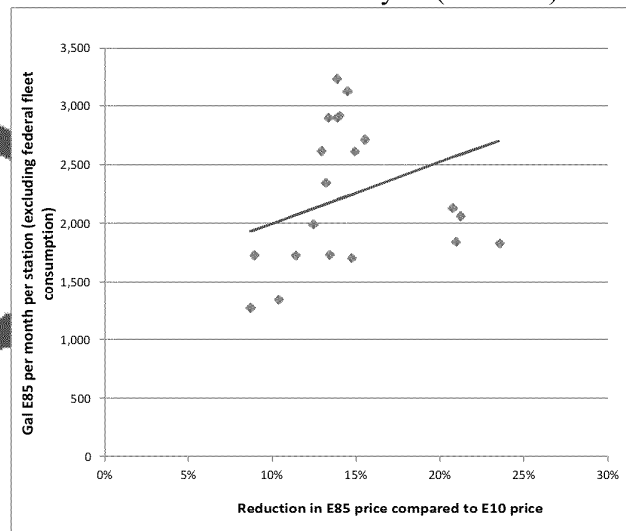
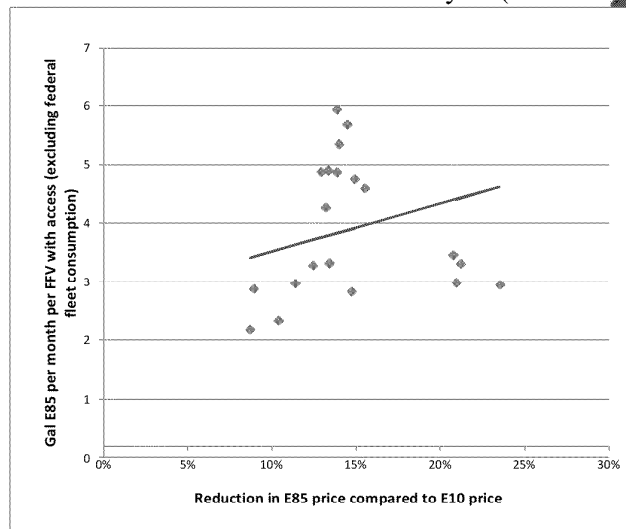


Figure 12  
Kansas Per FFV With Access Analysis ( $r^2 = 0.50$ )



G. *Correlations for New York*

$$\begin{aligned} \text{Gallons of E85 per month per station offering E85} = \\ 18830 \times (\% \text{ reduction in E85 price compared to E10 price}) + 3548 \end{aligned} \quad [\text{Eq. 9}]$$

$$\begin{aligned} \text{Gallons of E85 per month per FFV with access to E85} = \\ 8.432 \times (\% \text{ reduction in E85 price compared to E10 price}) + 1.951 \end{aligned} \quad [\text{Eq. 10}]$$

Figure 13  
New York Per Station Analysis ( $r^2 = 0.73$ )

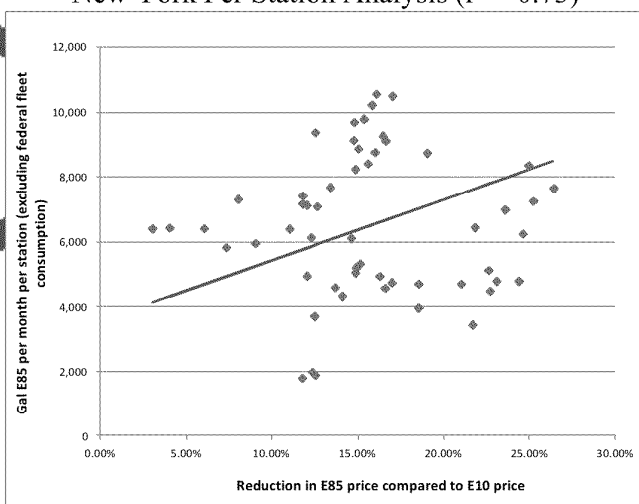
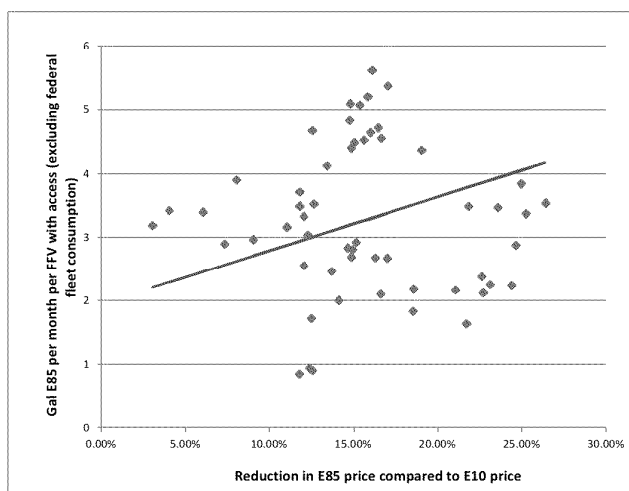


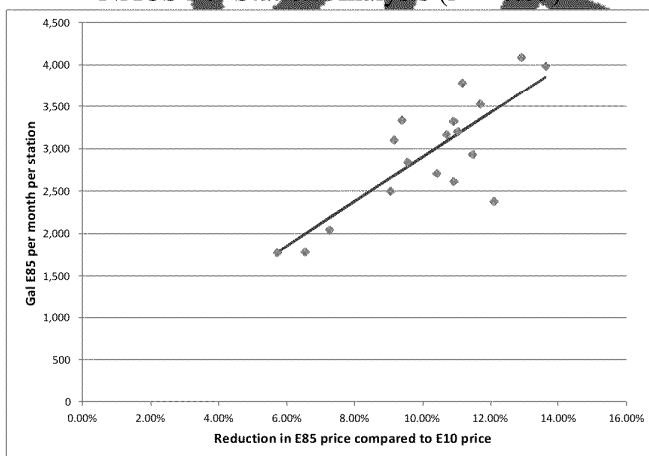
Figure 14  
New York Per FFV With Access Analysis ( $r^2 = 0.74$ )



#### H. Correlations Based On Survey Data from NACS

$$\text{Gallons of E85 per month per station offering E85} = 26410 \times (\% \text{ reduction in E85 price compared to E10 price}) + 266.3 \quad [\text{Eq. 11}]$$

Figure 15  
NACS Per Station Analysis ( $r^2 = 0.65$ )



#### I. Combined Correlations to Represent Entire U.S.

The correlations presented above demonstrate consumer behavior consistent with expectations: as the price of E85 decreases relative to the price of E10, sales of E85 increase.

Figure 16  
All Per Station Analyses

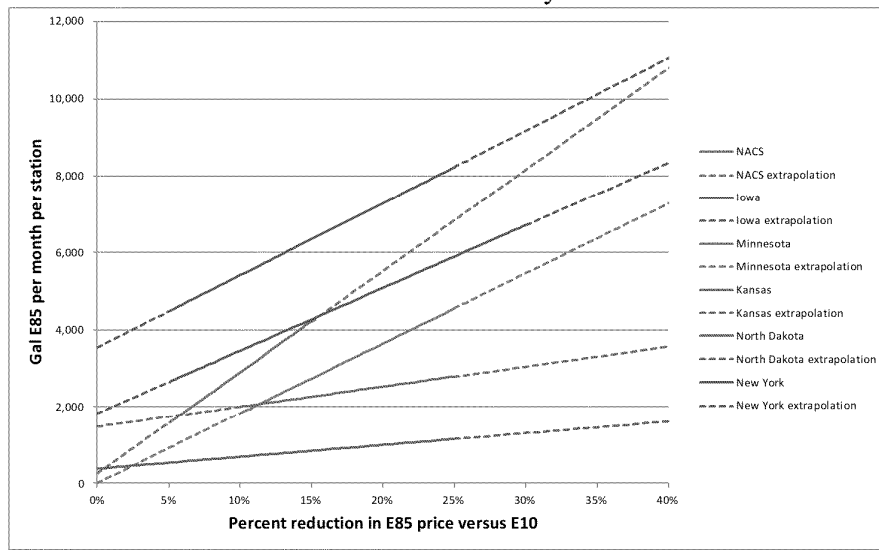
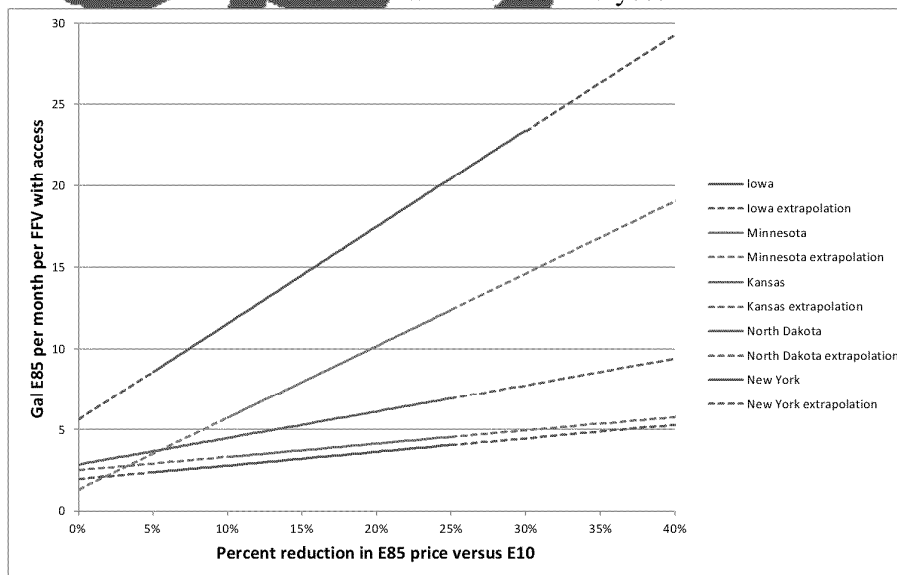


Figure 17  
All Per FFV with Access Analyses



The magnitude of this effect is different for each state, however. These differences may be the result of different marketing efforts (e.g. signage, consumer education), differing cultural attitudes towards renewable fuels, or differences in the way in which the data was collected. Currently we do not have sufficient information to suggest that retailers in all states could modify their approach to the sale of E85 to produce the maximum customer responses seen in the correlations in Figure 17 (i.e. Minnesota and Iowa). Therefore, to estimate the effect of changes

in the E85 price relative to E10 on E85 sales for the nation as a whole, we believe that the results for all five states should be combined.

For the per station analyses, we weighted equations 1, 3, 5, 7, and 9 together based on the estimated number of stations in each state to arrive at a single correlation representing all five states which provides the average volume of E85 per month per station.

Table 1  
Estimated Number of Retail Stations Offering E85 in 2014<sup>3,4</sup>

	E85 Retail Stations
Iowa	188
Minnesota	361
North Dakota	81
Kansas	37
New York	85
Total for 5 states	752
Total for all 50 states	2,740

The resulting equation representing all five states is shown below:

$$\text{Gallons of E85 per month per station offering E85} = 15,570 \times (\% \text{ reduction in E85 price compared to E10 price}) + 974 \quad [\text{Eq. 12}]$$

We then multiplied this equation by the total projected number of E85 stations (average over the year) in the U.S. (2,740) and by twelve months per year to arrive at a correlation that projects the volume of E85 for the nation as a whole in 2014.

#### Final Correlation for Per-Station Analysis for 5 States

$$\text{Million gallons of E85 in 2014} = 512 \times (\% \text{ reduction in E85 price compared to E10 price}) + 32 \quad [\text{Eq. 13}]$$

In a similar way, we converted the correlation representing per-station per-month data from NACS (Equation 11) into an equation representing the volume of E85 for the nation as a whole in 2014.

#### Final Correlation for Per-Station Analysis for NACS

$$\text{Million gallons of E85 in 2014} = 868 \times (\% \text{ reduction in E85 price compared to E10 price}) + 9 \quad [\text{Eq. 14}]$$

<sup>3</sup> State-by-state E85 station counts from DOE's Alternative Fuels Data Center, normalized to the projected 2014 nationwide total.

<sup>4</sup> Projection of nationwide total from "Projection of the number of retail stations offering E85 in 2014", memorandum from David Korotney to EPA Air Docket EPA-HQ-OAR-2013-0479.

For the per FFV analyses, we weighted equations 2, 4, 6, 8, and 10 together based on the estimated number of FFVs with access to E85 in each state to arrive at a single correlation representing all five states which provides the average volume of E85 per month per FFV. The fraction of FFVs with access to E85 was based on the same analysis used to produce Figure 4, but assuming an increase in the number of FFVs and E85 stations in each state for 2014 compared to 2013 as discussed in Section IV.C.1.b. of the final 2014 RFS standards rulemaking.

Table 2  
Estimated Number of FFVs with Access to E85 in 2014<sup>5</sup>

	Total FFVs	Fraction of FFVs with Access to E85 <sup>6</sup>	FFVs with Access to E85
Iowa	140,457	53.83%	75,614
Minnesota	244,545	75.18%	183,838
North Dakota	31,011	48.18%	14,941
Kansas	131,547	22.34%	29,387
New York	893,455	24.40%	218,023
Total for 5 states	1,441,014	36.21%	521,802
Total for all 50 states	14,235,151	28.21%	4,016,232

The resulting equation representing all five states for 2014 is shown below:

$$\text{Gallons of E85 per month per FFV with access to E85} = 28.65 \times (\% \text{ reduction in E85 price compared to E10 price}) + 2.316 \quad [\text{Eq. 15}]$$

We then multiplied this equation by the total projected number of FFVs with access to E85 in the U.S. in 2014 (4,016,232), and by twelve months per year to arrive at a correlation that projects the volume of E85 for the nation as a whole in 2014.

$$\text{Million gallons of E85 in 2014} = 1381 \times (\% \text{ reduction in E85 price compared to E10 price}) + 112 \quad [\text{Eq. 16}]$$

This equation projects an E85 sales volume of about 330 million gallons for an E85 price reduction of 15%. This is considerably higher than the 134 million gallons that we have estimated was sold in 2013 when the E85 price reduction was 15% (annual average).<sup>7</sup> While a higher volume for 2014 would be expected compared to 2013 based on a larger number of both FFVs and retail stations offering E85, a volume of 330 mill gal remains considerably higher than one would expect for 2014 based on these two factors alone. It is therefore likely that the aggregated correlation based on the 5-state per FFV analysis does not adequately represent the relationship between E85 prices reductions and E85 sales volumes in other states.

<sup>5</sup> Total number of FFVs in the fleet taken from EIA's Annual Energy Outlook 2014, Table 58. State-by-state FFV counts are based on population proportions by state applied to the nationwide FFV count.

<sup>6</sup> Based on the assumption of a 4 mile travel distance for an FFV to reach an E85 station.

<sup>7</sup> See Section IV.C.1.b. of the final 2014 RFS standards rulemaking.

In order to make use of the correlation based on the per-FFV analysis to project sales volumes of E85 in 2014, we calibrated the five-state correlation to the conditions that existed in 2013. To do this, we first re-aggregated equations 2, 4, 6, 8, and 10 together using an estimate of the number of FFVs with access to E85 in 2013. The fraction of FFVs with access to E85 was drawn from the values in Figure 3.

Table 3  
Estimated Number of FFVs with Access to E85 in 2013<sup>8</sup>

	Total FFVs	Fraction of FFVs with Access to E85	FFVs with Access to E85
Iowa	126,460	52.89%	66,887
Minnesota	220,175	74.55%	164,136
North Dakota	27,920	47.52%	13,267
Kansas	118,438	21.77%	25,785
New York	804,419	24.03%	193,330
Total for 5 states	1,297,412	35.72%	463,405
Total for all 50 states	12,816,566	27.69%	3,548,476

The resulting equation representing all five states for 2013 is shown below:

$$\text{Gallons of E85 per month per FFV with access to E85} = 28.69 \times (\% \text{ reduction in E85 price compared to E10 price}) + 2.315 \quad [\text{Eq. 17}]$$

We then multiplied this equation by the total projected number of FFVs with access to E85 in the U.S. in 2013 (3,548,476), and by twelve months per year to arrive at a correlation that projects the volume of E85 for the nation as a whole in 2013.

$$\text{Million gallons of E85 in 2013} = 1221 \times (\% \text{ reduction in E85 price compared to E10 price}) + 99 \quad [\text{Eq. 18}]$$

In order to calibrate this equation, we introduced a new scaling factor X, and then determined the necessary value of X that would yield 134 million gallons at an E85 price reduction of 15%.

$$\begin{aligned} 134 \text{ million gallons} &= X \times [1221 \times (15\%) + 99] \\ X &= 0.475 \end{aligned}$$

Finally, we introduced this same calibration factor of 0.475 to the aggregated equation for 2014, equation 16.

$$\text{Million gallons of E85 in 2014} = 0.475 \times [1381 \times (\% \text{ reduction in E85 price compared to E10 price}) + 112] [\text{Eq. 19}]$$

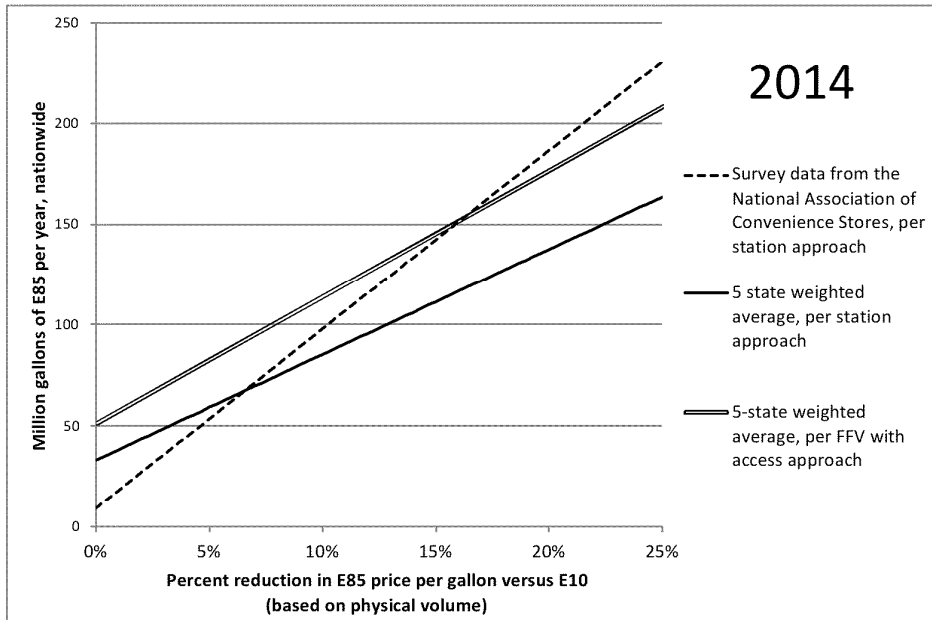
#### Final Correlation for Per-FFV Analysis

<sup>8</sup> Total number of FFVs in the fleet taken from EIA's Annual Energy Outlook 2014, Table 58. State-by-state FFV counts are based on population proportions by state applied to the nationwide FFV count.

$$\text{Million gallons of E85 in 2014} = 655 \times (\% \text{ reduction in E85 price compared to E10 price}) + 53$$

[Eq. 20]

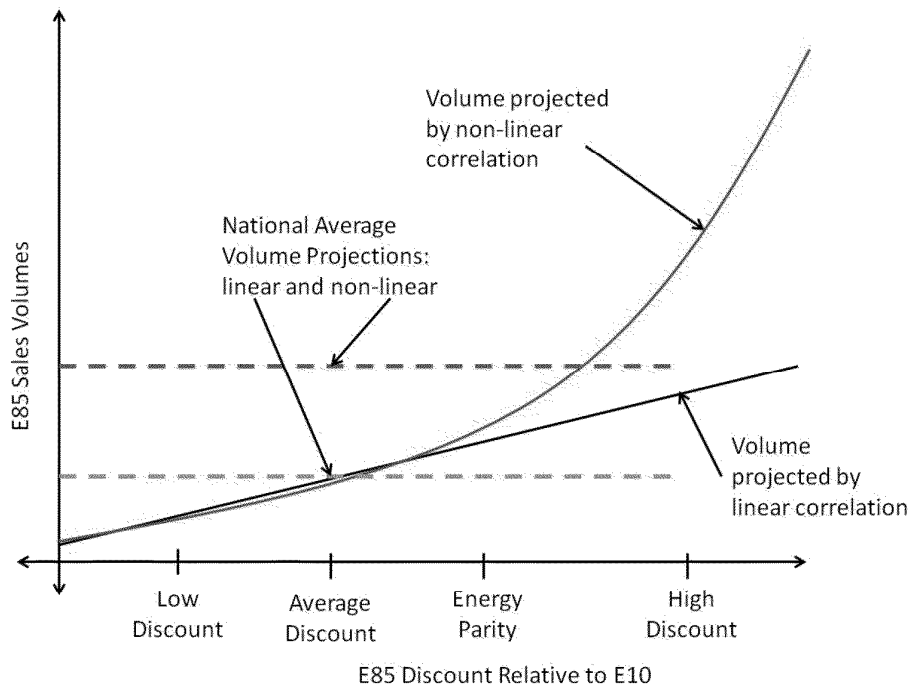
Figure 18  
Final Correlations for 2014



#### J. Analysis of Station-Specific Data from Minnesota

The majority of the information available to EPA was available only in aggregate at a state level. Based on this data we developed linear correlations between the average price discount of E85 relative to E10 and the total sales volume of E85 as discussed in the preceding sections. While this linear relationship is well supported by the data available to EPA, it has been suggested that if the price of E85 was to be cheaper than the price of E10 on an energy equivalent basis (i.e. to exceed 22%) that sales volumes of E85 could increase dramatically. Because very few of these months for which EPA has data had an average E85 price discount greater than the difference in energy content between a gallon of E85 and a gallon of E10 it is difficult to observe whether or not E85 sales do in fact increase significantly when the price of E85 is cheaper than E10 on an energy equivalent basis. As discussed in Section III of the preamble to the final 2014 RFS standards rulemaking, we do not expect the national average price discount for E85 relative to E10 to exceed energy parity in 2014, however it is likely that individual stations may price E85 below E10 on an energy equivalent basis at least at times. Using a linear correlation to estimate the volume of E85 sold based on the expected average price of E85 relative to E10 could underestimate the actual volume sold if the sales volumes from individual stations that choose to price E85 cheaper than E10 on an energy equivalent basis are better represented by a non-linear relationship. This concern is illustrated in Figure 18 below.

Figure 18  
Impact of Linear vs. Non-Linear Correlations on E85 Volume Projections

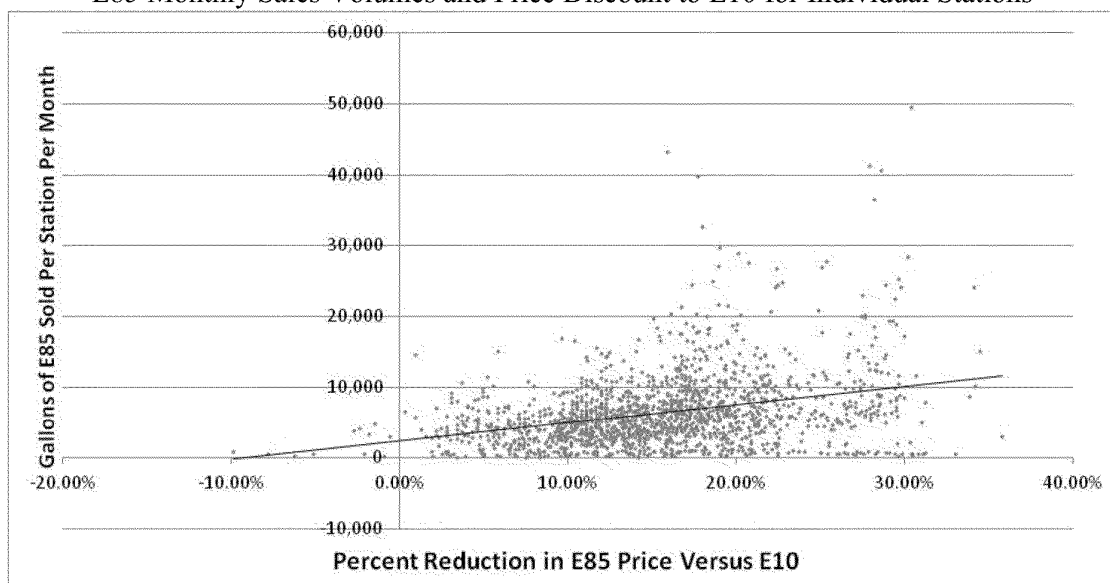


In order to address this concern, EPA acquired station specific pricing and sales volumes for E85 for the state of Minnesota from 2012 and 2013. This data set contains E85 sales volumes for a significant number of months in which E85 was priced cheaper than E10 on an energy equivalent basis. We can therefore use this information to determine if sales volumes of E85 increase significantly beyond what would be projected by a linear relationship when E85 is offered at a discount to E10 on an energy equivalent basis.

To perform this analysis we first narrowed the data set to include only those stations that offered E85 at a discount relative to E10 that exceeded 25%. Doing this should allow us to observe a non-linear relationship between E85 sales and the discount for E85 relative to E10 when this discount exceeds price parity if one exists. The data set obtained from the State of Minnesota Department of Commerce contained information from 69 stations that offered a price discount for E85 relative to E10 that exceeded 25% for at least one month in the time period for which data was available. Figure 19 below shows the monthly sales volumes from these stations versus the monthly average E85 discount relative to E10.<sup>9</sup>

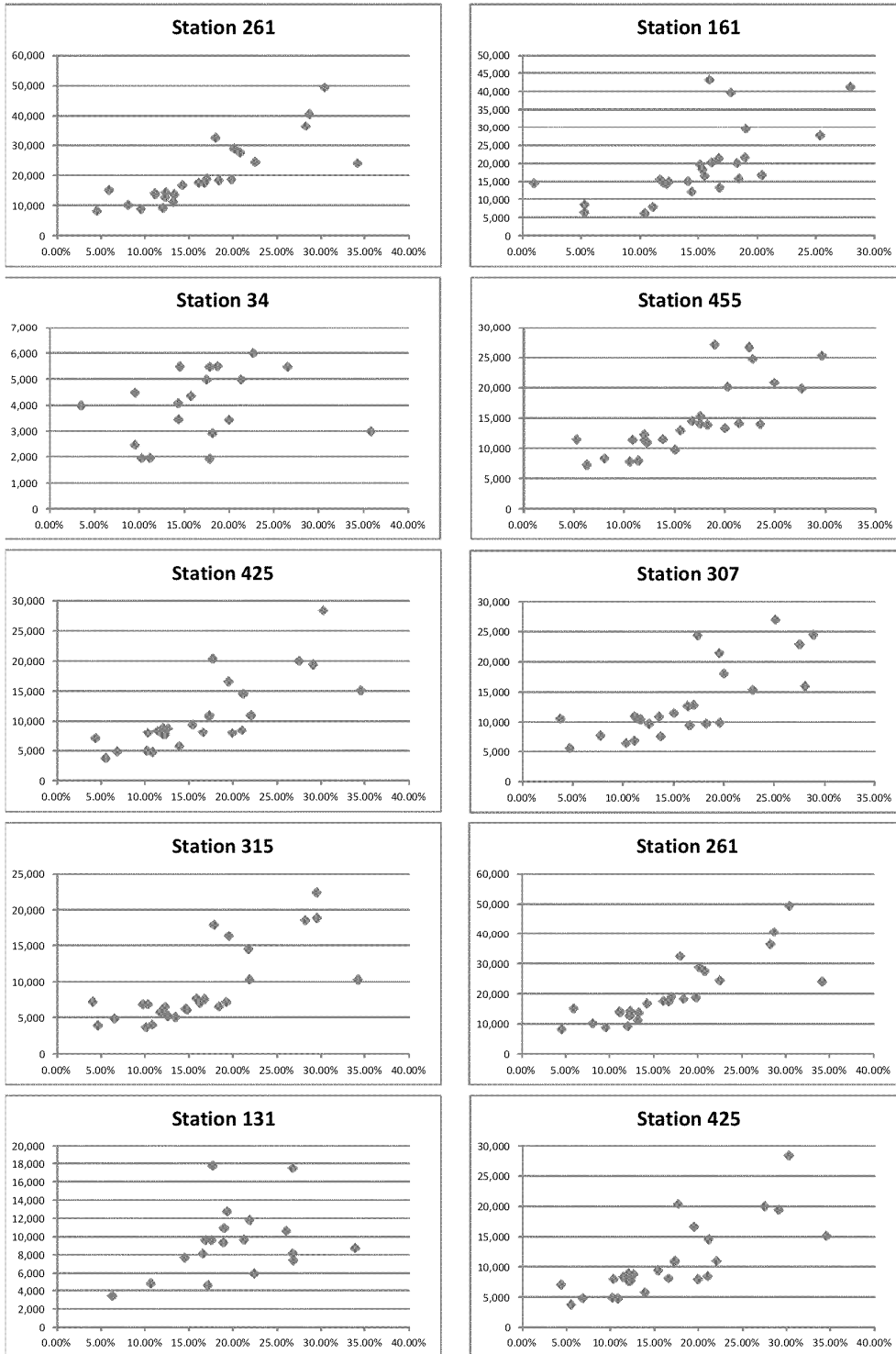
<sup>9</sup> The data from Minnesota did not contain information on the price of E10 for each of the individual stations. EPA has used the state average retail price for conventional regular gasoline in Minnesota as reported by EIA as the E10 price in calculating the percent discounts for E85 relative to E10.

Figure 19  
E85 Monthly Sales Volumes and Price Discount to E10 for Individual Stations



In examining the available information on E85 sales and pricing relative to E10 for only stations that offered E85 at a discount greater than energy parity EPA was unable to observe any trends that would imply a non-linear relationship at E85 discounts beyond energy parity. Even this subset of data, however, is sufficiently large as to potentially mask stations that did experience a non-linear relationship between E85 sales volumes and price relative to E10 at discounts that exceeded energy parity. EPA next created individual plots for the 5 stations that had the highest monthly sales volumes of E85 and the highest discounts for E85 relative to E10 for the time period in which data was available. These plots are shown in Figure 19 below. Note that two stations appear both in the list of stations with the highest sales volumes and in the list of stations with the largest price discounts for E85 relative to E10.

Figure 20  
Stations with the Highest E85 Sales Volumes and Price Discounts  
Highest Percent Discounts Highest E85 Sales Volumes



Even when limiting the scope of our analysis we see no data that suggests that the relationship between E85 sales volumes and the price discount of E85 relative to E10 is non-linear. This suggests that, at least at the current time, significant sales volume increases are unlikely to occur as the discount for E85 relative to E10 approaches and exceeds energy parity. It also supports EPA's methodology of using a linear correlation between E85 sales volumes and price discount relative to E10 along with the projected national average price discount to project sales volumes of E85 in 2014.

DRAFT

## Appendix

Table A-1  
Raw Data Provided by Minnesota Department of Revenue

Month	E85 Volume
Jan-09	1,010,413
Feb-09	783,794
Mar-09	744,426
Apr-09	683,253
May-09	880,903
Jun-09	1,079,702
Jul-09	1,172,135
Aug-09	1,055,823
Sep-09	1,052,030
Oct-09	984,693
Nov-09	989,779
Dec-09	902,729
Jan-10	926,254
Feb-10	730,306
Mar-10	762,705
Apr-10	1,078,416
May-10	1,095,215
Jun-10	1,256,264
Jul-10	1,197,900
Aug-10	1,317,050
Sep-10	1,289,232
Oct-10	1,233,748
Nov-10	1,183,427
Dec-10	1,073,737
Jan-11	1,074,136
Feb-11	997,158
Mar-11	1,114,905
Apr-11	1,538,268
May-11	1,630,187
Jun-11	1,788,828
Jul-11	1,584,718
Aug-11	1,449,305
Sep-11	1,403,809
Oct-11	1,277,400
Nov-11	1,160,671
Dec-11	1,152,628

Jan-12	1,443,844
Feb-12	526,600
Mar-12	918,604
Apr-12	1,090,863
May-12	1,184,102
Jun-12	1,229,913
Jul-12	1,160,019
Aug-12	1,169,016
Sep-12	1,124,890
Oct-12	1,026,417
Nov-12	1,019,293
Dec-12	731,370
Jan-13	561,119
Feb-13	558,286
Mar-13	736,629
Apr-13	707,448
May-13	823,068
Jun-13	1,516,751
Jul-13	1,332,764
Aug-13	1,415,664
Sep-13	1,484,826
Oct-13	1,479,898

Table A-2  
Raw Data Provided by Iowa Department of Revenue

	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
<b>2013</b>	1,834,947	2,623,949		
<b>2012</b>	2,319,835	2,309,836	2,782,928	1,659,832
<b>2011</b>	2,524,037	3,698,872	2,565,969	1,940,119
<b>2010</b>	1,612,198	2,769,667	2,853,619	2,076,424
<b>2009</b>	1,118,985	1,792,203	1,956,328	1,659,519
<b>2008</b>	1,302,480	2,217,095	2,208,837	1,939,511
<b>2007</b>	407,932	800,491	941,547	1,270,587
<b>2006</b>	297,103	570,961	636,331	470,964

Table A-3  
Raw Data Provided by North Dakota's Ethanol Council (through ND Ethanol Today)

January 2009	14,030
February 2009	13,038
March 2009	12,897
April 2009	17,621
May 2009	22,552
June 2009	29,582
July 2009	28,077
August 2009	29,228
September 2009	26,619
October 2009	29,004
November 2009	27,340
December 2009	25,269
January 2010	23,316
February 2010	23,869
March 2010	29,931
April 2010	46,616
May 2010	56,260
June 2010	52,917
July 2010	58,483
August 2010	66,217
September 2010	83,360
October 2010	72,657
November 2010	68,909
December 2010	81,192
January 2011	79,729
February 2011	83,884
March 2011	97,903

April 2011	113,903
May 2011	129,180
June 2011	106,590
July 2011	120,279
August 2011	160,162
September 2011	114,359

Table A-4  
Raw Data Provided by Kansas Department of Revenue

Jan-12	67,853
Feb-12	102,251
Mar-12	126,199
Apr-12	113,937
May-12	121,968
Jun-12	102,015
Jul-12	91,747
Aug-12	95,842
Sep-12	92,395
Oct-12	98,781
Nov-12	58,960
Dec-12	45,898
Jan-13	40,941
Feb-13	55,545
Mar-13	65,918
Apr-13	56,527
May-13	70,513
Jun-13	66,187
Jul-13	58,790
Aug-13	62,873

Table A-5  
Raw Data Provided by New York Department of Revenue

January 2008	29,948
February 2008	51,329
March 2008	68,204
April 2008	80,615
May 2008	113,700
June 2008	175,540
July 2008	155,701

August 2008	149,632
September 2008	157,076
October 2008	148,837
November 2008	94,206
December 2008	61,822
January 2009	54,118
February 2009	60,700
March 2009	71,897
April 2009	72,621
May 2009	128,995
June 2009	170,049
July 2009	182,542
August 2009	184,361
September 2009	198,035
October 2009	189,553
November 2009	181,921
December 2009	164,714
January 2010	175,255
February 2010	203,124
March 2010	213,667
April 2010	282,198
May 2010	356,071
June 2010	387,101
July 2010	398,817
August 2010	434,135
September 2010	349,987
October 2010	373,157
November 2010	336,971
December 2010	386,318
January 2011	417,685
February 2011	385,752
March 2011	649,823
April 2011	656,798
May 2011	816,680
June 2011	749,740
July 2011	725,414
August 2011	672,301
September 2011	641,722
October 2011	610,445
November 2011	543,453
December 2011	540,819

January 2012	407,170
February 2012	592,646
March 2012	813,499
April 2012	862,358
May 2012	841,607
June 2012	776,908
July 2012	746,567
August 2012	758,558
September 2012	739,541
October 2012	801,877
November 2012	516,705
December 2012	566,423
January 2013	541,209
February 2013	556,828
March 2013	646,002
April 2013	592,750
May 2013	629,470
June 2013	606,074
July 2013	523,867
August 2013	623,550

Table A-6  
Federal Fleet Consumption of E85 Provided By GSA Office of  
Governmentwide Policy (gallons)

	2009	2010	2011	2012
AK	4	926	8,371	9,856
AL	26,246	56,297	55,267	124,669
AR	60,906	76,388	100,573	185,527
AZ	81,491	235,205	217,834	306,868
CA	338,797	536,149	1,047,003	1,060,226
CO	164,887	338,480	226,252	596,192
CT	7,163	6,281	12,514	18,147
DC	1,354,248	1,401,167	2,030,682	440,958
DE	12,031	12,835	13,562	45,306
FL	604,690	493,646	571,004	741,216
FO	85,238	45,064	71,299	92,211
GA	159,267	311,208	196,938	468,225
HI	89	0	83,921	156,349
IA	193,168	144,832	213,676	367,708
ID	130,825	200,076	261,587	314,102
IL	372,760	434,429	565,088	838,575
IN	313,420	352,157	382,369	522,948

KS	56,812	68,999	82,979	297,945
KY	125,713	87,506	73,141	116,214
LA	24,495	27,663	81,654	179,515
MA	32,588	25,204	45,378	71,767
MD	225,474	362,388	443,412	487,197
ME	24,916	2,878	19,137	15,341
MI	187,871	229,384	185,955	283,504
MN	347,648	362,471	487,501	528,050
MO	273,103	261,064	171,121	443,402
MS	26,864	28,037	49,152	171,254
MT	64,246	49,307	50,907	157,839
NC	161,090	298,141	406,816	614,179
ND	162,432	217,909	242,069	285,578
NE	59,469	57,995	75,650	255,361
NH	3,645	5,511	6,676	11,636
NJ	128,178	82,254	154,731	195,845
NM	243,571	268,862	354,645	411,832
NV	245,512	244,301	294,335	429,822
NY	169,884	325,934	258,789	304,763
OH	406,641	346,904	421,420	556,768
OK	40,646	37,850	95,463	191,929
OR	36,227	24,833	32,823	104,861
PA	261,197	156,941	164,278	244,315
PR	3,513	2,823	2,144	4,300
RI	6,433	6,323	7,388	7,979
SC	387,156	605,480	443,454	594,930
SD	108,072	111,479	133,222	199,384
TN	194,712	314,056	301,128	404,327
TX	268,908	1,029,641	686,959	1,010,696
UT	25,395	26,966	113,276	65,184
VA	105,698	161,325	370,621	677,681
VT	3	2,192	16,222	17,492
WA	407,428	595,223	554,698	785,760
WI	188,804	164,304	262,835	419,671
WV	32,748	22,992	47,283	90,985
WY	33,172	54,882	44,847	123,844
Total	8,975,494	11,315,157	13,240,049	17,050,232

Table A-7  
Estimating the Number of FFVs in Each State in Each Year<sup>†</sup> (thousands)

	Population	FFV estimates					
		2009	2010	2011	2012	2013	2014
Alabama	4,780	122	133	154	176	198	220
Alaska	710	18	20	23	26	29	33
Arizona	6,392	163	177	206	236	265	295
Arkansas	2,916	74	81	94	107	121	134
California	37,254	949	1,034	1,199	1,373	1,546	1,718
Colorado	5,029	128	140	162	185	209	232
Connecticut	3,574	91	99	115	132	148	165
Delaware	898	23	25	29	33	37	41
District of Columbia	602	15	17	19	22	25	28
Florida	18,801	479	522	605	693	780	867
Georgia	9,688	247	269	312	357	402	447
Hawaii	1,360	35	38	44	50	56	63
Idaho	1,568	40	43	50	58	65	72
Illinois	12,831	327	356	413	473	533	592
Indiana	6,484	165	180	209	239	269	299
Iowa	3,046	78	85	98	112	126	140
Kansas	2,853	73	79	92	105	118	132
Kentucky	4,339	111	120	140	160	180	200
Louisiana	4,533	116	126	146	167	188	209
Maine	1,328	34	37	43	49	55	61
Maryland	5,774	147	160	186	213	240	266
Massachusetts	6,548	167	182	211	241	272	302
Michigan	9,884	252	274	318	364	410	456
Minnesota	5,304	135	147	171	196	220	245
Mississippi	2,967	76	82	96	109	123	137
Missouri	5,989	153	166	193	221	249	276
Montana	989	25	27	32	36	41	46
Nebraska	1,826	47	51	59	67	76	84
Nevada	2,701	69	75	87	100	112	125
New Hampshire	1,316	34	37	42	49	55	61
New Jersey	8,792	224	244	283	324	365	405
New Mexico	2,059	52	57	66	76	85	95
New York	19,378	494	538	624	714	804	893
North	9,535	243	265	307	352	396	440

Carolina							
North Dakota	673	17	19	22	25	28	31
Ohio	11,537	294	320	371	425	479	532
Oklahoma	3,751	96	104	121	138	156	173
Oregon	3,831	98	106	123	141	159	177
Pennsylvania	12,702	324	352	409	468	527	586
Rhode Island	1,053	27	29	34	39	44	49
South Carolina	4,625	118	128	149	171	192	213
South Dakota	814	21	23	26	30	34	38
Tennessee	6,346	162	176	204	234	263	293
Texas	25,146	641	698	809	927	1,044	1,159
Utah	2,764	70	77	89	102	115	127
Vermont	626	16	17	20	23	26	29
Virginia	8,001	204	222	258	295	332	369
Washington	6,725	171	187	216	248	279	310
West Virginia	1,853	47	51	60	68	77	85
Wisconsin	5,687	145	158	183	210	236	262
Wyoming	564	14	16	18	21	23	26
Total	308,746	7,866	8,567	9,938	11,382	12,817	14,235

<sup>†</sup> Nationwide FFV counts from EIA's Annual Energy Outlook apportioned to each state based on population within each state

Table A-8  
E85 Price Reductions in Comparison to E10 Price from E85prices.com

	Nationwide	North Dakota	Iowa	Minnesota	Kansas	New York
January 2009		3.57%	19.23%	16.40%		
February 2009		7.15%	14.94%	14.86%		11.73%
March 2009		9.39%	16.96%	16.35%		12.33%
April 2009		7.75%	17.66%	14.99%		12.50%
May 2009		10.80%	22.30%	17.00%		21.67%
June 2009		15.70%	24.45%	17.59%		22.67%
July 2009		16.48%	23.14%	17.54%		23.07%
August 2009		16.46%	26.29%	18.59%		24.37%
September 2009		16.25%	24.04%	18.20%		22.59%
October 2009		16.09%	22.56%	19.18%		18.52%
November 2009		19.08%	17.69%	18.46%		14.08%
December 2009		13.60%	14.38%	16.64%		12.44%
January 2010	13.14%	15.25%	17.72%	18.53%		18.50%
February 2010	14.89%	15.73%	19.40%	18.67%		16.56%
March 2010	18.02%	19.09%	24.84%	17.59%		21.00%

April 2010	20.22%	21.67%	29.95%	18.28%		24.60%
May 2010	22.04%	24.50%	30.49%	19.21%		26.40%
June 2010	20.65%	21.40%	28.32%	21.35%		24.93%
July 2010	20.32%	21.50%	30.12%	21.03%		23.56%
August 2010	18.74%	23.80%	29.05%	21.17%		21.80%
September 2010	16.16%	25.20%	24.03%	21.43%		16.25%
October 2010	13.98%	16.50%	16.53%	20.36%		14.88%
November 2010	11.88%	11.17%	13.83%	18.51%		13.64%
December 2010	13.41%	11.17%	19.28%	16.44%		16.95%
January 2011	13.78%	11.80%	21.35%	15.49%		15.12%
February 2011	14.61%	11.40%	22.94%	16.93%		14.83%
March 2011	15.41%	16.17%	19.95%	16.88%		15.96%
April 2011	17.23%	23.29%	26.02%	16.55%		15.57%
May 2011	15.85%	18.88%	23.35%	16.22%		16.05%
June 2011	13.41%	16.00%	18.92%	14.98%		14.76%
July 2011	12.63%	14.25%	17.47%	14.85%		14.73%
August 2011	11.53%	13.33%	16.97%	15.39%		14.82%
September 2011	10.23%	17.50%	16.14%	15.40%		13.38%
October 2011	10.31%	14.00%	15.06%	16.62%		8.00%
November 2011	7.70%	14.22%	11.56%	15.32%		4.00%
December 2011	6.98%	10.75%	7.63%	14.50%		6.00%
January 2012	8.46%	11.75%	8.51%	13.38%	5.44%	12.00%
February 2012	11.51%	12.38%	16.28%	12.89%	9.80%	11.75%
March 2012	14.45%	14.00%	19.25%	13.83%	12.25%	15.33%
April 2012	13.66%	15.40%	17.03%	13.96%	9.78%	17.00%
May 2012	12.45%	17.50%	14.07%	14.45%	8.00%	15.80%
June 2012	13.02%	16.13%	16.44%	14.88%	5.00%	16.44%
July 2012	9.17%	12.86%	13.55%	13.16%		15.00%
August 2012	10.72%	7.80%	12.25%	13.31%	8.00%	16.60%
September 2012	11.21%	9.40%	16.22%	15.48%	10.50%	19.00%
October 2012	8.93%	8.70%	11.96%	13.83%	8.50%	12.50%
November 2012	7.07%	8.60%	8.04%	11.36%		7.29%
December 2012	5.30%	5.75%	5.81%	10.36%	14.00%	11.00%
January 2013	6.07%	4.91%	7.40%	8.67%	1.00%	9.00%
February 2013	11.65%	7.86%	15.73%	8.88%	18.00%	12.25%
March 2013	13.04%	7.33%	15.15%	12.41%	19.00%	12.60%
April 2013	14.25%	10.00%	13.68%	14.69%	3.67%	3.00%
May 2013	16.88%	12.75%	19.49%	20.72%	4.50%	11.75%
June 2013	18.26%	16.50%	16.15%	21.19%	2.00%	12.00%
July 2013	18.82%	17.56%	22.67%	23.52%	11.43%	14.60%
August 2013	20.10%	23.10%	24.94%	20.91%	8.00%	25.20%

September 2013	17.94%	25.00%	23.47%	23.61%		11.50%
October 2013	17.13%	20.67%	19.75%	19.82%	3.00%	11.33%
November 2013	16.81%	21.50%	18.82%	19.96%	9.00%	9.75%

Table A-9  
Number of retail stations offering E85 from AFDC

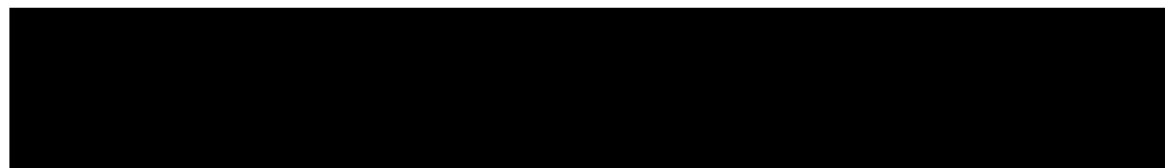
	Nationwide	North Dakota	Iowa	Minnesota	Kansas	New York
January 2009	1,730	30	107	357	24	17
February 2009	1,871	31	109	363	32	30
March 2009	1,877	31	108	363	33	32
April 2009	1,875	31	107	363	33	33
May 2009	1,893	31	111	363	33	34
June 2009	1,922	31	117	363	33	35
July 2009	1,941	31	123	363	33	35
August 2009	1,944	31	123	350	33	35
September 2009	1,933	31	123	351	33	35
October 2009	1,937	28	124	351	33	36
November 2009	1,966	29	124	351	32	37
December 2009	1,982	30	124	351	31	38
January 2010	1,982	30	124	351	31	38
February 2010	1,999	30	126	352	31	39
March 2010	2,016	30	128	353	31	40
April 2010	2,030	30	129	354	30	41
May 2010	2,051	30	138	354	30	43
June 2010	2,051	30	138	354	30	43
July 2010	2,104	39	140	353	34	53
August 2010	2,142	48	141	352	37	63
September 2010	2,164	48	141	354	37	65
October 2010	2,170	48	141	355	37	66
November 2010	2,173	50	141	355	37	67
December 2010	2,296	55	144	360	39	75
January 2011	2,331	57	147	362	39	73
February 2011	2,345	58	149	364	38	71
March 2011	2,349	58	151	364	38	71
April 2011	2,387	59	154	365	38	75
May 2011	2,388	59	154	365	38	75
June 2011	2,386	59	155	351	37	75
July 2011	2,407	62	157	356	39	77
August 2011	2,429	62	157	358	39	79
September 2011	2,442	62	158	360	39	81

October 2011	2,454	68	161	362	40	81
November 2011	2,468	68	163	363	40	82
December 2011	2,494	74	167	364	40	82
January 2012	2,515	75	171	366	39	79
February 2012	2,512	75	172	367	39	80
March 2012	2,498	75	172	362	39	81
April 2012	2,498	75	171	361	39	80
May 2012	2,499	75	175	361	39	80
June 2012	2,493	75	178	360	39	81
July 2012	2,490	75	179	360	39	81
August 2012	2,544	75	179	360	33	80
September 2012	2,553	77	181	361	34	81
October 2012	2,541	77	183	361	34	82
November 2012	2,535	77	185	349	34	83
December 2012	2,519	80	185	349	34	83
January 2013	2,596	79	188	361	32	85
February 2013	2,596	79	188	361	32	85
March 2013	2,601	79	189	360	33	86
April 2013	2,611	79	183	366	33	87
May 2013	2,622	79	183	365	33	80
June 2013	2,610	79	183	363	32	80
July 2013	2,614	79	183	352	32	80
August 2013	2,630	79	183	353	34	81
September 2013	2,625	79	184	336	34	81
October 2013	2,639	79	186	336	29	81
April 2014	2,704	58	184	282	25	79

**To:** Whiteman, Chad  
**From:** Hengst, Benjamin  
**Sent:** Mon 9/8/2014 2:21:02 PM  
**Subject:** Re: Meeting with USDA

**Ex. 6 - Personal Privacy**

OK. We can do any start time between 1:30 and 5:30 (just to be clear). I don't think we could start at 5:30.



I'm checking with USDA about Thursday at 1:30 or 5:30. I have also proposed holding the meeting next week as Rob J. is out all this week. I'll keep you posted.

**From:** Hengst, Benjamin [mailto:Hengst.Benjamin@epa.gov]  
**Sent:** Sunday, September 07, 2014 9:35 PM  
**To:** Whiteman, Chad  
**Subject:** Meeting with USDA

Chad--we are still, I believe, trying to set up a meeting on the 2014 RFS RVO rule with you and USDA.

This week, as we've discussed, is tricky due to a managers' meeting EPA is having in Ann Arbor, and due to various meetings that are occurring outside of that managers' meeting.

Mon/Tues/Weds are pretty much out of the question at this point

Can you see whether any time on Thursday between 1:30 and 5:30 would work for a meeting with USDA?

Thanks,

Ben

**To:** Whiteman, Chad[  
**From:** Hengst, Benjamin  
**Sent:** Mon 9/8/2014 1:35:05 AM  
**Subject:** Meeting with USDA

**Ex. 6 - Personal Privacy**

Chad--we are still, I believe, trying to set up a meeting on the 2014 RFS RVO rule with you and USDA.

This week, as we've discussed, is tricky due to a managers' meeting EPA is having in Ann Arbor, and due to various meetings that are occurring outside of that managers' meeting.

Mon/Tues/Weds are pretty much out of the question at this point

Can you see whether any time on Thursday between 1:30 and 5:30 would work for a meeting with USDA?

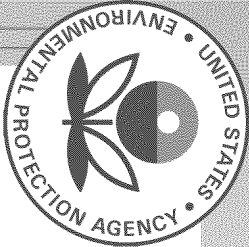
Thanks,

Ben

**To:** Whiteman, Chad  
**From:** Hengst, Benjamin  
**Sent:** Thur 8/28/2014 1:41:44 PM  
**Subject:** Slides for 1pm meeting  
RFS 2014 final rule, overview for 8-28-14 interagency (final).pptx

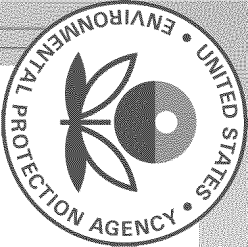
**Ex. 6 - Personal Privacy**

Chad--slides for the 1pm are attached. We will bring hard copies for folks in the room.  
Ben



# 2014 RFS Standards Overview of Draft Final Rule

August 28, 2014



# Current Status of 2014 Volume Projections

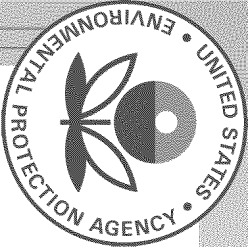
All volumes are million gallon ethanol-equivalent except where indicated

	2014 Statutory volumes	NPRM	2013 Actual <sup>b</sup>	Final 2014 Volumes
Cellulosic standard	1,750	17	0.8	30
Biodiesel standard	1,000	1,280	1,605	1,600
Advanced biofuel Std/Vol	3,750	2,202	3,016	3,276
Biodiesel (physical)	1,000	1,405	1,605	1,853
Biodiesel (eth-equiv)	1,500	2,107	2,457	2,860
Sugarcane ethanol		0	435	227
Total renewable fuel	18,150	15,207	15,744	16,985
Conventional <sup>a</sup>	14,400	13,005	12,728	13,709

Note that the values have been updated through July based on latest EIA and EPA data

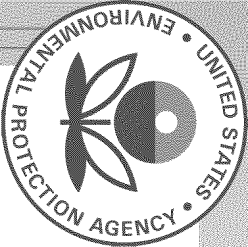
<sup>a</sup> The "conventional" volume equals total renewable minus advanced, and includes all non-advanced renewable fuel, including ethanol and non-ethanol, though typically it is corn ethanol. Total ethanol consumption, however includes both corn ethanol and other advanced ethanol.

<sup>b</sup> Represents consumption (production + imports - exports)



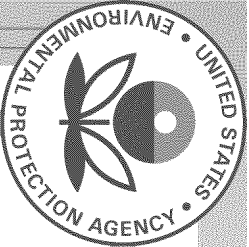
# Background

- 2014 volume rule NPRM published November 29, 2013
  - Comment period closed January 28 (received about 340,000 comments)
- EPA proposed to use Clean Air Act waiver authorities to reduce total renewable and advanced biofuel volume requirements
- NPRM and final rule cite practical constraints on supply of ethanol to vehicles (E10 blendwall)
  - Also discusses limitations in ability of industry to supply certain types of biofuels (cellulosic and advanced)
  - We note that these constraints and limitations make statutory volumes infeasible, and that statute gives EPA explicit authority to waive statutory mandates
- NPRM discussed and sought comment on different approaches to setting volume requirements



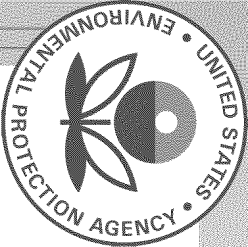
# Final Rule

- Sets volume requirements that are generally higher than last year's actual levels, and that will incentivize realistically achievable growth in renewable fuels
  - Aims to provide certainty for investments to increase the RFS volumes in 2014 and beyond
- Uses a methodology that assumes steady build-out of E85 infrastructure, and incorporates growth assumptions for domestic advanced renewable fuels
- Provides for some competition among biofuel technologies while also ensuring growth in biomass-based diesel
  - Preserves space to let market decide which options are lowest-cost
- Uses same legal authorities as proposed
  - Cellulosic waiver authority: the Administrator "may" reduce advanced and total by up to any reduction in cellulosic. Used for equal reductions in advanced and total.
  - General waiver authority: inadequate domestic supply. Used for additional reduction in total to address the blendwall.



# Cellulosic Standard

- The FRM volume is 30 mill gal, comprised of liquid biofuels as well as biogas volumes not included in the NPRM
- 3 mill gallons of liquid biofuel
  - A reduction of 14 mill gal from the NPRM estimate
  - Based on updated information
  - For FRM we are using the 25<sup>th</sup> percentile of the projected range based on history of overestimates by cellulosic biofuel industry
- 27 mill gallons (ethanol equivalent) of biogas
  - An increase from the NPRM of zero
    - NPRM discussed biogas but did not include it in the proposed standard
  - EPA finalized new cellulosic pathway for biogas in June
  - Stakeholders projected 150M+ gallons from biogas for all of 2014
    - Multiple landfill biogas facilities have completed registration or are in process



# Total Renewable Fuel Standard

- **Total renewable fuel standard =**

All ethanol that can be consumed as E10

+ All realistically achievable volumes of ethanol that can be consumed as E85 and E15

+ All available non-ethanol advanced and conventional biofuel

- **Final volumes are ~1.78 bill gal greater than the NPRM**

- Ethanol consumed as E10 is higher than proposed due to higher gasoline consumption forecast from EIA

- Accounts for ~580 mill gallons

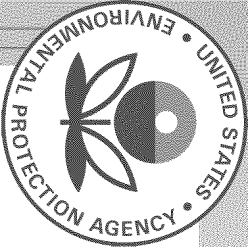
- Much higher projected biodiesel availability

- Accounts for ~670 mill gallons (ethanol equivalent)

- Other non-ethanol advanced and conventional biofuels (based on updated information)

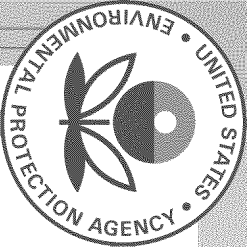
- Accounts for ~530 mill gallons (ethanol equivalent)

- **We are not counting carry-over RINs in setting the standard (to preserve compliance flexibility)**



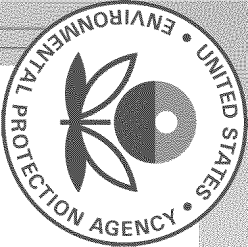
# E85

- The final rule projects 164 mill gal of E85 in 2014 (very close to NPRM projection)
- Based on updated analysis
  - Projected E85 volume based on growth projections for # of FFVs, # of retail stations with E85
  - Relationship between price of E85 vs E10 and sales volume
- Sale of E85 is a function of price
- Data show that wholesale and retail prices for E85 do not follow renewable fuel costs and RIN prices
  - Currently there is not a competitive market for E85
  - Wholesalers and retailers retain renewable fuel and RIN cost savings as profit
    - To pay off their cost for infrastructure
  - The average price discount for E85 is likely to remain ~16-17% in 2014
    - Short of even energy parity pricing (22%)
  - Wholesale/retail profit will spur steady rise in E85 infrastructure
- We expect E85 volumes will rise concurrently with growth in FFVs and E85 stations until the market grows to the point where competition forces down prices to consumers, at which point E85 volumes should grow even faster



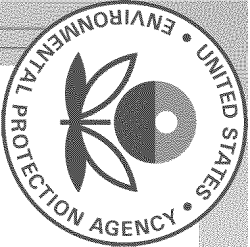
# Advanced Biofuel Standard

- Final advanced biofuel standard =
  - Cellulosic biofuel
  - + Biomass-based diesel
  - + All available other advanced biofuels, both ethanol and non-ethanol
- The inclusion of all available ethanol volumes in setting the advanced standard is a shift from the NPRM (NPRM proposed “Option 3,” FRM is “Option 1”)
  - NPRM comments raised: WTO concerns, loss of GHG benefits
  - Even with the inclusion of ethanol in determining the advanced standard, conventional renewable fuels will continue to rise beyond 2013 actual levels under the 2014 FRM standards
- The advanced biofuel volume for the FRM is nearly 1 billion RINs higher than the NPRM driven by the higher projected biodiesel volume and the inclusion of imported advanced biofuels
  - For the FRM we are including net imports of both BBD and advanced ethanol based on updated information, whereas for the NPRM we assumed they would be zero



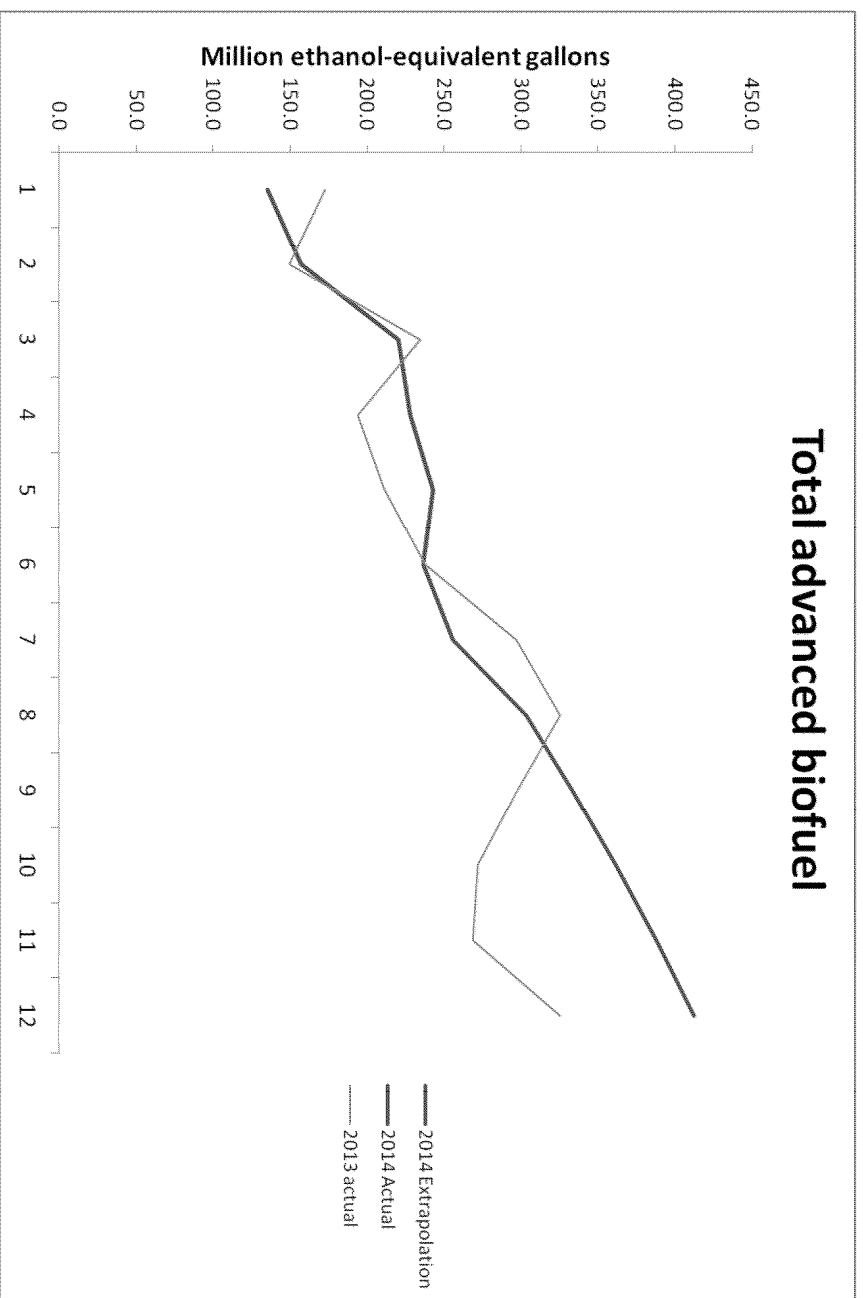
# Biomass-Based Diesel Standard

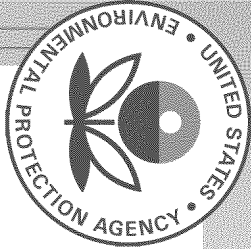
- We are setting the advanced biofuel standard assuming 1.85 bill gal of BBD will be available
  - 2013 showed that the biodiesel industry can compete against other advanced biofuels under the advanced biofuel standard
  - 2014 data shows they are continuing to do so
- We are finalizing a BBD standard at 1.60 bill gal (proposal was 1.28 bill gal)
  - Moderate increase over 1.28, but still less than the 1.85 bill gal that is achievable
  - 1.60 was the high end of the range we considered in the NPRM for inclusion in the advanced standard
- Establishing a moderately higher BBD standard
  - Would support the goal of the program for increased volumes of advanced biofuel while also maintaining the incentive for other advanced biofuels to participate
  - While the BBD sector has been successful, there continues to be some degree of uncertainty in the sector. A moderate increase in the standard would provide additional stability to the industry and the RFS program, consistent with the statute's goals.
  - Would have no impact on the total volume of advanced biofuels, nor the benefits of advanced biofuels
- NPRM proposed a 2015 BBD standard of 1.28 billion
  - We are not planning to finalize 2015 at this time



# Timing

- Intersection between the date on which the rule is finalized and ability of the market to actually supply the required volumes

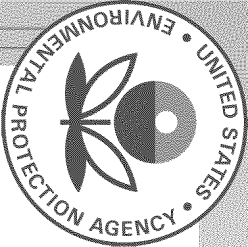




# Appendix

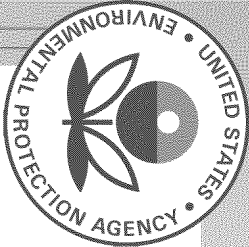
# Summary of Analytical Methodology for Advanced Biofuel and Total Renewable Fuel

- Monte Carlo analysis was not used for the final rule
  - There was no need to project ranges for the standards
- Domestic projection was based on the 50th percentile of a range defined as:
  - Low end: Total production in the most recent 12 months
  - High end: 4 x highest consecutive 3 months within the most recent 12 months
  - Result is a volume which is demonstrably achievable
- Imports projection was based on total imports in the most recent 12 months
  - Imports are much more variable than domestic production, and subject to many more international market factors that cannot be easily projected



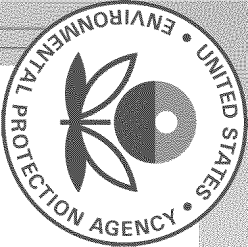
# Treatment of Carryover RINs

- We are not counting carryover RINs in our calculation of how much to waive the total and advanced standards
- Counting carryover RINs would result in higher required volumes than projected physical volumes in 2014
  - Would tend to drive up RIN prices
  - Temporary impact on standards, as it would likely lead to fewer carryover RINs next year
- We believe it is important to preserve those RINs for compliance flexibility in 2014 (and probably the next several years) as RFS program transitions beyond the blendwall and new biofuels are still ramping up



# Historical Biomass-Based Diesel

	2013		August 2013 - July 2014	
	RINs	Volume	RINs	Volume
Domestic production	2,185	1,449	2,237	1,473
Imports	553	344	642	395
Exports (this number is a subset of domestic production)	282	188	240	160
Total (domestic + imports - exports)	2,457	1,605	2,639	1,708



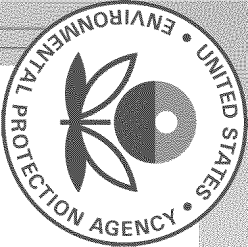
# CAA 211(o) Waiver Authority

## ■ 7(A) General waiver authority

- *EPA, in consultation with USDA and DOE, may waive the requirements of paragraph (2) in whole or in part on petition by one or more States, by any person subject to the requirements of this subsection, or by the Administrator on his own motion based on a determination after public notice for comment that:*
  - Implementation of the requirement would severely harm the economy or environment of a State, a region, or the United States; or
  - There is an inadequate domestic supply.

## ■ 7(D)(i) Cellulosic biofuel waiver

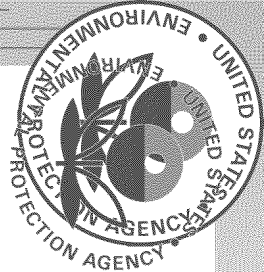
- *For any calendar year for which the projected volume of cellulosic biofuel production is less than the minimum applicable volume established under paragraph (2)(B), as determined by EPA based on the estimate provided under paragraph (3)(A), not later than November 30 of the preceding calendar year, EPA shall reduce the applicable volume of cellulosic biofuel required under paragraph (2)(B) to the projected volume available during that calendar year. The administrator may also reduce the applicable volume of renewable and advanced biofuel by the same or lesser volume.*



# Volumes in the 2014 NPRM and Statute (m gal)

	Volume requirements for 2013	Statutory volumes for 2014	Proposed Volume (NPRM Option 3)	NPRM Option 2	NPRM Option 1
Cellulosic biofuel	6	1,750	17	17	17
Biomass-based diesel	1,280	1,280 <sup>a</sup>	1,280	1,280	1,280
Advanced biofuel	2,750	3,750	2,202	2,017	2,837
Total renewable fuel	16,550	18,150	15,207	15,207	15,207
Implied standard for conventional biofuel	13,800	14,400	13,005	13,190	13,370

<sup>a</sup> Statutory volume is 1,000 mill gal  
All volumes are ethanol-equivalent except for biomass-based diesel



# Statutory Volumes

	Cellulosic biofuel		Biomass-based diesel		Advanced biofuel		Total renewable fuel	"Conventional" (total renewable minus advanced)
2009	na		0.5		0.6		11.1	10.5
2010	0.1		0.65		0.95		12.95	12
2011	0.25		0.8		1.35		13.95	12.6
2012	0.5		1		2		15.2	13.2
2013	1		a		2.75		16.55	13.8
2014	1.75		a		3.75		18.15	14.4
2015	3		a		5.5		20.5	15
2016	4.25		a		7.25		22.25	15
2017	5.5		a		9		24	15
2018	7		a		11		26	15
2019	8.5		a		13		28	15
2020	10.5		a		15		30	15
2021	13.5		a		18		33	15
2022	16		a		21		36	15

a: statute sets 1b gal minimum, but EPA may raise requirement

**To:** Utech, Dan G. **Ex. 6 - Personal Privacy**  
**From:** Hengst, Benjamin  
**Sent:** Wed 8/6/2014 8:40:16 PM  
**Subject:** RE: draft biofuels memo  
Memo on Advanced Biofuels 7-31-14 v3 - EPA.docx

Dan—I know this is late but we’ve had various folks out on leave.

I spoke with Janet today and she said to go ahead and send this –as you’ll see, we only had minor edits. If the train has already left the station on this, then no problem. Nothing too major.  
Thanks, Ben

**From:** Utech, Dan G. **Ex. 6 - Personal Privacy**  
**Sent:** Thursday, July 31, 2014 7:20 PM  
**To:** Hengst, Benjamin  
**Subject:** FW: draft biofuels memo

fyi

**From:** Utech, Dan G.  
**Sent:** Thursday, July 31, 2014 7:19 PM  
**To:** [kevin.knobloch@hq.doe.gov](mailto:kevin.knobloch@hq.doe.gov); [Melanie.Kenderdine@Hq.Doe.Gov](mailto:Melanie.Kenderdine@Hq.Doe.Gov); Thieman, Karla - OSEC; Baenig, Brian - OSEC; Janet McCabe ([mccabe.janet@epa.gov](mailto:mccabe.janet@epa.gov)); Simon, Bob; Miller, Jason; Minsk, Ron; Ericsson, Sally C.; Zaidi, Ali; Duke, Rick; Carr, Mike ([Mike.Carr@ee.Doe.Gov](mailto:Mike.Carr@ee.Doe.Gov)) ([Mike.Carr@ee.Doe.Gov](mailto:Mike.Carr@ee.Doe.Gov)); Linn, Joshua; Costa, Kristina; Shulman, Sophie  
**Cc:** Wong, Jacqueline

**Subject:** draft biofuels memo

I think you are all aware that we have an assignment to produce a memo that provides a status update on commercialization of cellulosic and other advanced biofuels. Attached is a draft I pulled together based on initial input from DOE and USDA. We need to get this into review here on Tuesday of next week, so **please provide edits back to me and Jackie Wong (cc'ed) by COB tomorrow, Friday August 1.** I apologize for the short turn-around, but we need to keep this process moving forward given other schedules. You'll have additional opportunities to weigh in over the weekend/early next week. EPA and DOE, I have identified a couple of specific questions for you in comment bubbles.

As you review the memo, please keep in mind that the scope is intentionally narrow in two ways: 1) It is focused on the status of advanced biofuel production technology development, not on the whole suite of biofuels technology and policy questions or the larger, related set of questions around low-carbon transport options (e.g., EVs); 2) It is not a policy options memo. Happy to discuss scope if useful or other issues as they arise.

Thanks in advance and let me know if you have questions.

Dan Utech

Special Assistant to the President for Energy and Climate Change

White House Domestic Policy Council

Ex. 6 - Personal Privacy

# MEMORANDUM ON STATUS OF ADVANCED BIOFUEL DEVELOPMENT

## Overview

The transportation sector accounted for 28 percent of U.S. greenhouse gas emissions in 2012, making it the second-largest source of domestic emissions after the electric power sector.<sup>1</sup> Petroleum accounted for 92 percent of the primary energy supplied to the transportation sector in 2013, followed by 5 percent from renewable energy and 3 percent from natural gas.<sup>2</sup> U.S. transportation sector energy use – including light-duty vehicles, heavy-duty vehicles, aircraft, marine vessels, rail, and other sources – peaked in 2007 and is projected to decline out to 2030. Decarbonizing the transportation sector will depend on a mix of approaches to reduce petroleum consumption in all transportation modes, including:

- (1) continuing momentum on improving fuel economy;
- (2) scaling up alternative low-carbon liquid fuels; and
- (3) further developing alternative propulsion technologies (such as electric vehicles) in the light-duty sector.

This memo focuses on the second of these approaches, and more specifically on the status of the development of advanced, low-carbon biofuels. Commercialization of these fuels has lagged expectations, including those set by Congress as part of the Renewable Fuel Standard (RFS). This memo provides a brief assessment of advanced biofuel technology development and an overview of Administration efforts in this area, focusing on DOE and USDA research, development, and deployment.

## Background

The Energy Independence and Security Act of 2007 (EISA) set aggressive goals to increase the supply of renewable transportation fuels to 36 billion gallons by 2022 through the Renewable Fuel Standard (RFS). The RFS requires that 21 billion of these gallons be advanced biofuels (16 billion of which was to be cellulosic biofuel), which are defined as renewable fuels (other than ethanol derived from cornstarch) that have greenhouse gas emissions that are at least 50 percent less than those of gasoline or diesel depending on which the renewable fuel serves as a substitute (and 60% in the case of cellulosic biofuel).<sup>3</sup>

Together with tax subsidies, the RFS has helped to drive corn-based ethanol and biodiesel to make up about 10 percent of the gasoline pool and 1.5 percent of the diesel pool, respectively.<sup>4</sup>

<sup>1</sup> U.S. Environmental Protection Agency (<http://www.epa.gov/climatechange/ghgemissions/sources/electricity.html>)

<sup>2</sup> U.S. Department of Energy, Energy Information Administration, “Primary Energy Consumption by Source and Sector, 2013,” <[http://www.eia.gov/totalenergy/data/monthly/pdf/flow/css\\_2013\\_energy.pdf](http://www.eia.gov/totalenergy/data/monthly/pdf/flow/css_2013_energy.pdf)>.

<sup>3</sup> The RFS program defines “advanced biofuels” to include both biodiesel and sugar-cane ethanol, and these fuels make up the bulk of the current production of advanced fuels as defined in that context. Given the limitations associated with these fuels (limited U.S. sugar production in the case of sugar-cane ethanol and high production costs in the case of biodiesel), “advanced biofuels” in the context of memo refers more narrowly to low-carbon biofuels based on cellulosic or other non-food materials.

<sup>4</sup> U.S. Energy Information Administration (<http://www.eia.gov/biofuels/issuestrends/>)

However, the production of advanced biofuels – particularly cellulosic biofuel – has fallen short of expectations. For example, in 2014, the RFS statutory target for cellulosic biofuels is 1.75 billion gallons, but EPA anticipates that only 34 million gallons will be produced this year. In short, cost-competitive technologies have not emerged as quickly as anticipated. Cellulosic ethanol, the most commercially-ready advanced biofuel, also faces challenges associated with the ethanol blend wall, though other cellulosic biofuels – such as cellulosic “green gasoline,” cellulosic diesel, and cellulosic biogas – do not face the same challenge.

## **Research, Development, and Deployment Paths for Biofuels**

There are two broad pathways to concentrating the energy in biological feedstocks to usable, energy-dense, liquid forms for transportation – biochemical and thermochemical conversion. Biochemical conversion uses enzymes or chemical processes to deconstruct the biomass molecules and organisms such as yeast distill them into a more energy-dense and usable form. Thermochemical conversion generally uses a physical heat process to break down the feedstock molecules and chemical reactions to re-assemble them to a usable form.

Research and development along these various pathways entails addressing technical challenges and demonstrating processes beginning at the lab bench scale and progressing through successive stages, addressing new process challenges at each stage, through pilot to demonstration, and eventually to full pioneer commercial-scale facilities. Even when fully developed, the pioneer commercial facility is generally much more expensive than the average commercial operating facility that will be built when the industry matures because design, operating and other efficiencies are identified over time.

## **Status of Cellulosic Ethanol Development**

As noted above, corn-based ethanol accounts for most U.S. biofuel production. Because of the extensive experience with ethanol production, early industry and government efforts to develop cellulosic biofuels have focused on cellulosic ethanol. Beginning in 2006, DOE made significant initial investments in cellulosic ethanol R&D. In 2012, DOE, alongside its partners in industry and the national laboratories, successfully demonstrated production of cellulosic ethanol at a modeled mature cost<sup>5</sup> of approximately \$2.15 per gallon, or \$3.35 per gallon of gasoline equivalent (GGE).<sup>6</sup> (See Appendix A for additional details). This represents a significant drop in cost from levels at over \$13 per gallon in 2001.

The nation’s first demonstration-scale cellulosic ethanol facility, run by INEOS Bio in Vero Beach, Florida, began producing initial product in 2013, and has a projected capacity of 8 million gallons per year.<sup>7</sup> Furthermore, American Process Inc. began producing the first

<sup>5</sup> Modeled mature cost is a projected wholesale, finished fuel price, calculated by applying technology learning curves to small-scale demonstrations of existing technologies. Modeled mature cost is a reflection of what prices would be if today’s small-scale or pioneer technologies were scaled to wide-scale commercial production.

<sup>6</sup> “Gasoline equivalent” prices are higher because ethanol has less energy per gallon than gasoline, so it takes 1.5 gallons of ethanol to produce the energy of a gasoline gallon. Ethanol currently sells in the market as a gasoline substitute on a per gallon basis, not a gasoline equivalent basis.

<sup>7</sup> EPA 2014 Standards for the Renewable Fuel Standard Program (*Federal Register*, Vol. 78, No. 230, Nov. 29, 2013, Proposed Rules

quantities of cellulosic ethanol from mixed forest residue (approx. 900,000 gallons/year) in 2014 at its biorefinery in Alpena, Michigan. Additional facilities utilizing cellulosic feedstocks are expected to begin producing fuels this year (two of the largest of these facilities are POET-DSM in Emmetsburg, Iowa with projected capacity of 25 million gallons per year and Abengoa in Hugoton Kansas with a projected capacity of 25 million gallons per year).

The production capacity increase to over 50 million gallons per year of cellulosic ethanol represented by these plants may be augmented substantially by other plants in the next few years. Last year, an analysis of potential compliance with the California Low-Carbon Fuel Standard found that some 27 facilities nationwide for producing cellulosic ethanol—representing a combined production capacity of between 337 and 512 million gallons annually by 2015--were in some stage of advanced financing.<sup>8</sup>

### **Status of Development of Advanced “Drop-In” Biofuels**

While the expanded production of cellulosic ethanol is a promising development, cellulosic ethanol is still subject to blend wall challenges. As a result, there is a large focus on drop-in biofuels, which are chemically similar to hydrocarbon fuels, generally compatible with existing fuel infrastructure, and can be blended at any stage of fuel transmission. Two forms of advanced “drop-in” biofuels, biodiesel and renewable diesel, are already being produced at commercial scale quantities in the United States. DOE and the bioenergy community are now leveraging cellulosic ethanol RD&D successes to accelerate cellulosic and algal drop-in biofuel technologies that can be used to displace gasoline, diesel and jet fuel. DOE seeks to contribute significantly to making cellulosic drop-in biofuels competitive with petroleum-based fuels, aiming to make technologies available between 2017 and 2022 that, when scaled to commercial volumes over a subsequent five year period, can produce fuels at less than \$3 per gallon of gasoline equivalent.

### **Conclusion**

This memo focuses on the narrow question of commercial readiness of advanced biofuel technologies, a key part of a portfolio of technological approaches to reducing oil dependence and carbon emission in the transportation sector. Thanks in part to USG investment, cellulosic ethanol technology is in initial stages of commercial deployment. DOE is now focused on scaling up those efforts and also on supporting R&D efforts to develop advanced “drop-in” biofuels. DOE’s goal for all advanced biofuels is to achieve a modeled mature price<sup>9</sup> of \$3 per gallon on a gasoline-equivalent basis by between 2017 and 2022.<sup>10</sup> However, it is important to note that even if that goal is achieved, it will likely be several more years until advanced biofuels can be produced at a commercial scale at prices that are competitive with gasoline.

This memo does not offer policy prescriptions, but we close by noting some barriers to

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<sup>8</sup> ICF International (2013). *California’s Low Carbon Fuel Standard: Compliance Outlook for 2020*, p. 31.

<sup>9</sup> Modeled mature cost is a projected wholesale, finished fuel price, calculated by applying technology learning curves to small-scale demonstrations of existing technologies. Modeled mature cost is a reflection of what prices would be if today’s small-scale or pioneer technologies were scaled to wide-scale commercial production.

<sup>10</sup> 2017-2022 is the target range for biochemical and thermochemical pathways; algal biofuels are longer-range.

deployment. First, like corn-based ethanol, cellulosic ethanol faces infrastructure barriers to deployment. Nearly all gasoline sold in the United States is now “E10,” which is fuel with up to 10 percent ethanol, the maximum percentage of ethanol on which most cars on the road were designed to operate. Rising ethanol production under the RFS, combined with lower gasoline demand than forecasted when the RFS was enacted, have brought us to the “blend wall,” the point at which future growth in ethanol sales now depends on increased use of higher ethanol blends such as E15 and E85. Within these constraints, cellulosic ethanol is competing against corn-based ethanol.

In addition, financing of commercial-scale advanced biofuels plants is difficult. Government and venture capital funds are available through demonstration phases, but the initial commercial facilities are generally too capital intensive for venture capital and too risky for private banks and government. Once a technology gets past the initial commercial facility and is proven, financing may be available through banks and government. DOE and USDA loan programs have provided assistance to some facilities (See Appendix B). Additional resources remain in both programs, but significant private financing will also be needed to bring these technologies to scale.

## Appendix A: DOE Modeled Production Costs for Cellulosic Ethanol and Drop-in Biofuels

DOE has funded three technology pathways for the conversion of biomass to cellulosic ethanol. Cost data from pioneer projects for these technologies indicate that prices are expected to come down to \$3.50 per GGE or lower when produced at high volumes in full commercial scale.

- Biological Conversion of Biomass to Ethanol
  - Pioneer projects have achieved \$4.33 per GGE
  - Modeled mature cost is \$2.15 per gal (\$3.50 per GGE)
- Thermochemical Conversion of Biomass to Ethanol
  - Pioneer projects have achieved \$4.47 per GGE
  - Modeled mature cost is \$2.05 per gal (\$3.20 per GGE)
- Hybrid Biological/Thermochemical Conversion of Biomass to Ethanol
  - This technology is being demonstrated at pioneer scale this year
  - No modeled cost data available

DOE is actively developing the following technology pathways for production of advanced drop-in biofuels:

Technology approach	Current Scale	Modeled pilot cost & target year	Target Year to Pilot \$3/GGE
<b>Thermochemical</b>			
Fast Pyrolysis	Pilot & Bench	\$5.60 per GGE in 2014	2017
Catalytic Fast Pyrolysis	Bench	Not yet available*	2017-2022
Syngas	Bench	Not yet available*	2017-2022
<b>Biochemical</b>			
Fermentative	Pilot & Bench	\$5 per GGE in 2017	2022
<b>Hybrid biochemical/thermochemical</b>			
Catalytic	Bench	Not yet available*	2022
<b>Algae</b>			
Lipid Extraction	Bench	Not yet available*	2025-2030
Hydrothermal Liquifaction	Bench	\$4.49/GGE in 2022	2025-2030

\*Data expected in Fall 2014

## Appendix B: Key Administration Efforts to Support the Development of Advanced Biofuels

There are multiple Administration programs and initiatives to help the development of advanced biofuels. They range from supporting research and development, to paying for the design of specific facilities intended to produce biofuels for the Department of Defense, to more general financing support for new manufacturing facilities, to direct payments to subsidize the

production of advanced biofuels.

#### DOE's Integrated Bio-Refinery Program

As of July 2014, DOE's Integrated Bio-Refinery program has 20 active projects focused on developing additional technical pathways and improving existing pathways to enable advanced biofuels production. Roughly half of these biorefinery projects are cellulosic ethanol and half are drop-in biofuels or high-value bio-based chemicals. The objective of these first-of-a-kind technologies at pilot, demonstration, and commercial scales is to validate key technical and economic performance parameters and demonstrate the reduction of technical and logistical risks upon scaling to enable private investment.

#### Defense Production Act

Navy, DOE and USDA are working under an MOU to assist the development and support of a sustainable commercial biofuels industry through the Defense Production Act (DPA). The goal is to help establish biorefineries capable of production of more than 100 million gallons of renewable jet and diesel fuels for military use at costs equal or lower to \$4 per GGE by 2017. In 2013, four companies were selected to receive \$20.8 million for feasibility studies. The Departments of the Navy, Energy, and Agriculture anticipate making a joint announcement regarding selections for the next phase of DPA funding in Q4 of 2014.

#### USDA's Biorefinery Assistance Program

Since 2009, USDA's Biorefinery Assistance Program has issued 3 loan guarantees (\$12.8 million for an anaerobic digester in Michigan; \$75 million for a municipal solid waste to cellulosic ethanol biorefinery in Florida; and \$54.5 million for an algae-to-advanced aviation fuel biorefinery in New Mexico, which has since paid off its loan guarantee in full). In addition, it has awarded 4 conditional commitments (\$25 million for a cellulosic ethanol facility in Iowa; \$232.5 million for cellulosic ethanol facility in Oregon; \$105 million for advanced aviation fuel, and green diesel facility in Nevada; and \$99 million for cellulosic ethanol facility in North Carolina). When operational, these plants are expected to produce about 100 million gallons of advanced biofuels.

#### USDA's Advanced Biofuel Payment Program

Since 2009, USDA's Advanced Biofuel Payment has awarded almost \$237 million in payments to producers to support the production of almost 4.2 billion gallons of advanced biofuel.

#### USDA's Biomass Crop Assistance Program (BCAP)

BCAP provides financial assistance to owners and operators of agricultural and non-industrial private forest land who wish to establish, produce, and deliver biomass feedstocks. A total of \$322.7 million has been invested under the BCAP from FY 2009 – current. The 2014 Farm Bill provides \$125 million for this program over the next five years.

#### USDA's Rural Energy for America Program (REAP)

REAP provides assistance to agricultural producers and rural small businesses to complete a variety of projects, including renewable energy development. Since 2009, USDA REAP has awarded \$16.2 million grants and loan guarantees toward 32 biofuel projects; including both renewable fuels and advanced biofuels. These projects are expected to produce 67.5 million

gallons of fuel. REAP funding in the current Farm Bill is \$250 million for 2014-2018.

**To:** Thieman, Karla - OSEC[Karla.Thieman@osec.usda.gov]; Kawahata, Molly[Ex. 6 - Personal Privacy] 'Roy, Molly (CONTR)'[Molly.Roy@ee.Doe.Gov]; Campbell, Todd - OSEC[Todd.Campbell@osec.usda.gov]; Baumes, Harry - OCE[HBaumes@oce.usda.gov]  
**Cc:** LaMonaca, Sarah[Sarah.LaMonaca@EE.Doe.Gov]  
**From:** Hengst, Benjamin  
**Sent:** Mon 7/28/2014 1:13:31 PM  
**Subject:** RE: intros/biofuels memo

I can't do between 3-5, but 12-3 is open. If that doesn't work for others, I can catch up with Karla or Harry afterwards. Thanks—Ben (564-1495)

**From:** Thieman, Karla - OSEC [mailto:Karla.Thieman@osec.usda.gov]  
**Sent:** Monday, July 28, 2014 9:00 AM  
**To:** Kawahata, Molly; 'Roy, Molly (CONTR)'; Campbell, Todd - OSEC; Baumes, Harry - OCE; Hengst, Benjamin  
**Cc:** LaMonaca, Sarah  
**Subject:** RE: intros/biofuels memo

I'm pretty open this afternoon. I'm looping EPA too since they might have some data/information collected during RFS.

**From:** Kawahata, Molly [Ex. 6 - Personal Privacy]  
**Sent:** Friday, July 25, 2014 4:16 PM  
**To:** 'Roy, Molly (CONTR)'; Campbell, Todd - OSEC; Baumes, Harry - OCE  
**Cc:** Thieman, Karla - OSEC; LaMonaca, Sarah  
**Subject:** RE: intros/biofuels memo

Thanks for helping to coordinate! Dan will be out of office on Monday and I don't believe he plans to join.

**From:** Roy, Molly (CONTR) [mailto:Molly.Roy@ee.Doe.Gov]  
**Sent:** Friday, July 25, 2014 4:10 PM  
**To:** Kawahata, Molly; 'todd.campbell@osec.usda.gov'; 'hbaumes@oce.usda.gov'  
**Cc:** 'karla.thieman@osec.usda.gov'; LaMonaca, Sarah  
**Subject:** RE: intros/biofuels memo

Hi all,

I'll be covering for Mike Klotz while he's out next week and will be happy to help schedule this call for Monday. I've looped in Molly Kawahata who schedules for Dan Utech—let me know who I should work with on the USDA and EPA sides. Thanks!

Molly Roy

Executive Assistant

SRA International

Contractor to U.S. Department of Energy | Office of Energy Efficiency and Renewable Energy

US Department of Energy

(202) 586-0159

[molly.roy@ee.doe.gov](mailto:molly.roy@ee.doe.gov)

**From:** Carr, Mike

**Sent:** Friday, July 25, 2014 03:01 PM

**To:** 'Karla.Thieman@osec.usda.gov' <[Karla.Thieman@osec.usda.gov](mailto:Karla.Thieman@osec.usda.gov)>

**Cc:** 'Todd.Campbell@osec.usda.gov' <[Todd.Campbell@osec.usda.gov](mailto:Todd.Campbell@osec.usda.gov)>; 'HBaumes@oce.usda.gov' <[HBaumes@oce.usda.gov](mailto:HBaumes@oce.usda.gov)>; LaMonaca, Sarah; Klotz, Michael (CONTR)

**Subject:** Re: intros/biofuels memo

Sounds good. Mike, can you coordinate?

**From:** Thieman, Karla - OSEC [<mailto:Karla.Thieman@osec.usda.gov>]

**Sent:** Friday, July 25, 2014 02:08 PM

**To:** Carr, Mike

**Cc:** Campbell, Todd - OSEC <[Todd.Campbell@osec.usda.gov](mailto:Todd.Campbell@osec.usda.gov)>; Baumes, Harry - OCE <[HBaumes@oce.usda.gov](mailto:HBaumes@oce.usda.gov)>

**Subject:** RE: intros/biofuels memo

Mike –

Can we hop on a call on Monday? I'm looping Todd and Harry who have been helping us get our pieces together. I'll probably also reach out to Ben to see if he can hop on from EPA.

**From:** Utech, Dan G. **Ex. 6 - Personal Privacy**  
**Sent:** Friday, July 25, 2014 10:50 AM  
**To:** 'Mike.Carr@ee.Doe.Gov'; Thieman, Karla - OSEC  
**Subject:** intros/biofuels memo

Introducing you guys on email. Karla, Mike PDAS at EERE and point on the biofuels memo. We just talked it through. Mike, Karla is point on energy (and other things) in the Secretary's office at USDA. You two should connect on next steps. For planning purposes, please plan to get us a draft by COB Wednesday.

Also, I reached out to Janet McCabe but haven't closed the loop with her yet. But it's on her radar, so Karla, if you want to just reach out to Ben or someone in the program that's fine. I think EPA probably has some data on status of cellulosic commercialization that would be useful, but this memo shouldn't be about RFS per se. Let's plan on a call at some point Monday afternoon to see where we're at.

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**To:** Whiteman, Chad [Ex. 6 - Personal Privacy]  
**Cc:** Frey, Nathan J. [Ex. 6 - Personal Privacy]  
**From:** Hengst, Benjamin  
**Sent:** Fri 7/18/2014 9:03:35 PM  
**Subject:** RE: Nathan will be the backup on RFS while I'm out

Sounds good. Ben

**From:** Whiteman, Chad [Ex. 6 - Personal Privacy]  
**Sent:** Friday, July 18, 2014 4:57 PM  
**To:** Hengst, Benjamin  
**Cc:** Frey, Nathan J.  
**Subject:** Nathan will be the backup on RFS while I'm out

Will you please coordinate with Nathan on any RFS related rules while I'm out next week.

Thanks,

Chad

**To:** Beth Elliott (NCGA)[Elliott@dc.ncga.com]  
**Cc:** Argyropoulos, Paul[Argyropoulos.Paul@epa.gov]  
**From:** Hengst, Benjamin  
**Sent:** Mon 7/14/2014 6:17:33 PM  
**Subject:** RE: Speaker Request -- NCGA Ethanol Committee

Hi Beth,

Chris Grundler will be speaking on behalf of EPA; I'll be joining him. Chris will not be using slides.

Chris is the Director of the Office of Transportation and Air Quality. I'm his Associate Office Director.

OTAQ is the office responsible for implementing the RFS standard in EPA's Office of Air and Radiation.

Let me know if you need more info. If you need to contact me, my cell phone is  
Thanks, Ben

Ex. 6 - Personal Privacy

**From:** Beth Elliott (NCGA) [mailto:Elliott@dc.ncga.com]  
**Sent:** Friday, July 11, 2014 2:45 PM  
**To:** Hengst, Benjamin  
**Cc:** Argyropoulos, Paul  
**Subject:** RE: Speaker Request -- NCGA Ethanol Committee

That would be perfect. Thanks for being so flexible. If possible, please let me know who will be joining us by Monday COB so that we can appropriately plan for the correct person!

As a reminder, the meeting takes place at the Hilton Capital, located at 16<sup>th</sup> and K Streets, in room S. American B (on the 2<sup>nd</sup> floor). The room will be set up for powerpoint presentations if you plan to use one. Generally speaking, we would like to hear from you about the RVOs and CAFÉ standards (FFVs, CNG and Electric). Also, any recommendations on how we as corn farmers can help with the negative image of corn inside the Administration and around the country. As always, we want to help you, so any thoughts you can give would provide great insight.

If you have any questions or concerns, please do not hesitate to reach out. On the day of the meeting, I can be reached by email or on my cell at Ex. 6 - Personal Privacy

Thanks,

Beth

**From:** Hengst, Benjamin [<mailto:Hengst.Benjamin@epa.gov>]  
**Sent:** Friday, July 11, 2014 1:43 PM  
**To:** Beth Elliott (NCGA)  
**Cc:** Argyropoulos, Paul  
**Subject:** Re: Speaker Request -- NCGA Ethanol Committee

Hi Beth, I think either Paul or I can do this. Please put us down for 8:15 on Tuesday. Does that work?

**From:** Beth Elliott (NCGA)

**Sent:** Friday, July 11, 2014 11:18 AM

**To:** Drinkard, Andrea

**Cc:** Atkinson, Emily; Hengst, Benjamin; Argyropoulos, Paul; Birgfeld, Erin

**Subject:** RE: Speaker Request -- NCGA Ethanol Committee

Thank you for your assistance. We would be very appreciative if someone could join us for an hour on Tuesday.

Thanks,

---

**Beth Elliott**

Director, Public Policy | National Corn Growers Association

20 F Street NW, Suite 600 | Washington, DC 20001

[elliott@dc.ncga.com](mailto:elliott@dc.ncga.com) | 202-326-0649 direct | Ex. 6 - Personal Privacy cell

**From:** Drinkard, Andrea [<mailto:Drinkard.Andrea@epa.gov>]

**Sent:** Friday, July 11, 2014 7:37 AM

**To:** Beth Elliott (NCGA)

**Cc:** Atkinson, Emily; Hengst, Benjamin; Argyropoulos, Paul; Birgfeld, Erin

**Subject:** FW: Speaker Request -- NCGA Ethanol Committee

Hi Beth,

Thanks for your message and apologies for the delay. Janet is indeed unavailable next week, but I'm adding Ben Hengst and Paul Argyropoulos to this email from our Office of Transportation and Air Quality to see if they can identify someone who might be able to cover the meeting

Thanks again for thinking of us a please keep us in mind for future events.

-Andrea-

Andrea Drinkard

U.S. Environmental Protection Agency

Office of Air and Radiation

Email: [drinkard.andrea@epa.gov](mailto:drinkard.andrea@epa.gov)

Phone: 202.564.1601

Cell: Ex. 6 - Personal Privacy

**From:** Atkinson, Emily  
**Sent:** Tuesday, July 08, 2014 3:00 PM  
**To:** Drinkard, Andrea  
**Subject:** FW: Speaker Request -- NCGA Ethanol Committee

**From:** Beth Elliott [<mailto:Elliott@dc.ncga.com>]  
**Sent:** Tuesday, July 08, 2014 2:58 PM  
**To:** Atkinson, Emily  
**Subject:** RE: Speaker Request -- NCGA Ethanol Committee

Emily—

Thanks again for working on this scheduling request. We are in the process of finalizing our agendas and I wanted to check to see if Ms. McCabe would be available. We currently have these time slots available, but I can possibly move some things around to suit her schedule:

Monday, July 14: 11am or 4:15pm

Tuesday, July 15: 8:15am or 1:00 or 4:00pm

Thanks again,

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**Beth Elliott**

Director, Public Policy | National Corn Growers Association

20 F Street NW, Suite 600 | Washington, DC 20001

[elliott@dc.ncga.com](mailto:elliott@dc.ncga.com) | 202-326-0649 direct | Ex. 6 - Personal Privacy cell

**From:** Atkinson, Emily [<mailto:Atkinson.Emily@epa.gov>]

**Sent:** Tuesday, June 24, 2014 3:17 PM

**To:** Beth Elliott

**Subject:** RE: Speaker Request -- NCGA Ethanol Committee

Beth,

Yes I received it and am working to confirm if Janet could participate. We will circle back with you shortly to let you know.

Emily Atkinson  
Staff Assistant

Immediate Office of the Acting Assistant Administrator  
Office of Air and Radiation, USEPA  
Room 5406B, 1200 Pennsylvania Avenue NW  
Washington, DC 20460  
Voice: 202-564-1850  
Email: [atkinson.emily@epa.gov](mailto:atkinson.emily@epa.gov)

**From:** Beth Elliott [<mailto:Elliott@dc.ncga.com>]  
**Sent:** Tuesday, June 24, 2014 3:06 PM  
**To:** Atkinson, Emily  
**Subject:** RE: Speaker Request -- NCGA Ethanol Committee

Emily—

I wanted to confirm that you received this speaker request and possibly determine Ms. McCabe's availability.

Thanks!

Beth Elliott

**From:** Beth Elliott  
**Sent:** Tuesday, June 17, 2014 3:13 PM  
**To:** 'Atkinson.emily@epa.gov'  
**Subject:** Speaker Request -- NCGA Ethanol Committee

Emily—

Hope your week is going well and the heat hasn't already forced you to hide indoors!

Could you please assist in getting this scheduling request to Assistant Administrator Janet McCabe?

The National Corn Growers Association's Ethanol Committee would like to respectfully request Ms. McCabe to speak to the Committee during Corn Congress. The group is comprised of about 15 growers and 3 staffers, all of which are very engaged in ethanol policy. The meetings take place all day on July 14 and 15 at the Hilton Capital, at 16<sup>th</sup> and K.

Due to the recent developments in corn kernel fiber and the RFS RVOs, the Committee would really like to hear an update and find out how we can better help the EPA moving forward. If Ms. McCabe is available, speakers generally present for 45 minutes followed by a 15 minute Q&A.

Thanks,

Beth Elliott

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**Beth Elliott**

Director, Public Policy | National Corn Growers Association

20 F Street NW, Suite 600 | Washington, DC 20001

[elliott@dc.ncga.com](mailto:elliott@dc.ncga.com) | 202-326-0649 direct | Ex. 6 - Personal Privacy cell

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**To:** Beth Elliott (NCGA)[Elliott@dc.ncga.com]  
**Cc:** Argyropoulos, Paul[Argyropoulos.Paul@epa.gov]  
**From:** Hengst, Benjamin  
**Sent:** Fri 7/11/2014 7:12:53 PM  
**Subject:** Re: Speaker Request -- NCGA Ethanol Committee

Thanks. Can you confirm if this is closed. Or open to press?



That would be perfect. Thanks for being so flexible. If possible, please let me know who will be joining us by Monday COB so that we can appropriately plan for the correct person!

As a reminder, the meeting takes place at the Hilton Capital, located at 16<sup>th</sup> and K Streets, in room S. American B (on the 2<sup>nd</sup> floor). The room will be set up for powerpoint presentations if you plan to use one. Generally speaking, we would like to hear from you about the RVOs and CAFÉ standards (FFVs, CNG and Electric). Also, any recommendations on how we as corn farmers can help with the negative image of corn inside the Administration and around the country. As always, we want to help you, so any thoughts you can give would provide great insight.

If you have any questions or concerns, please do not hesitate to reach out. On the day of the meeting, I can be reached by email or on my cell at Ex. 6 - Personal Privacy

Thanks,

Beth

**From:** Hengst, Benjamin [mailto:Hengst.Benjamin@epa.gov]  
**Sent:** Friday, July 11, 2014 1:43 PM  
**To:** Beth Elliott (NCGA)  
**Cc:** Argyropoulos, Paul  
**Subject:** Re: Speaker Request -- NCGA Ethanol Committee

Hi Beth, I think either Paul or I can do this. Please put us down for 8:15 on Tuesday. Does that work?

**From:** Beth Elliott (NCGA)

**Sent:** Friday, July 11, 2014 11:18 AM

**To:** Drinkard, Andrea

**Cc:** Atkinson, Emily; Hengst, Benjamin; Argyropoulos, Paul; Birgfeld, Erin

**Subject:** RE: Speaker Request -- NCGA Ethanol Committee

Thank you for your assistance. We would be very appreciative if someone could join us for an hour on Tuesday.

Thanks,

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**Beth Elliott**

Director, Public Policy | National Corn Growers Association

20 F Street NW, Suite 600 | Washington, DC 20001

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Thanks again for thinking of us a please keep us in mind for future events.

-Andrea-

Andrea Drinkard

U.S. Environmental Protection Agency

Office of Air and Radiation

Email: [drinkard.andrea@epa.gov](mailto:drinkard.andrea@epa.gov)

Phone: 202.564.1601

Cell: Ex. 6 - Personal Privacy

**From:** Atkinson, Emily  
**Sent:** Tuesday, July 08, 2014 3:00 PM  
**To:** Drinkard, Andrea  
**Subject:** FW: Speaker Request -- NCGA Ethanol Committee

**From:** Beth Elliott [<mailto:Elliott@dc.ncga.com>]  
**Sent:** Tuesday, July 08, 2014 2:58 PM  
**To:** Atkinson, Emily  
**Subject:** RE: Speaker Request -- NCGA Ethanol Committee

Emily—

Thanks again for working on this scheduling request. We are in the process of finalizing our agendas and I wanted to check to see if Ms. McCabe would be available. We currently have these time slots available, but I can possibly move some things around to suit her schedule:

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Thanks again,

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Beth,

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Emily Atkinson  
Staff Assistant

Immediate Office of the Acting Assistant Administrator  
Office of Air and Radiation, USEPA  
Room 5406B, 1200 Pennsylvania Avenue NW  
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Beth Elliott

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20 F Street NW, Suite 600 | Washington, DC 20001

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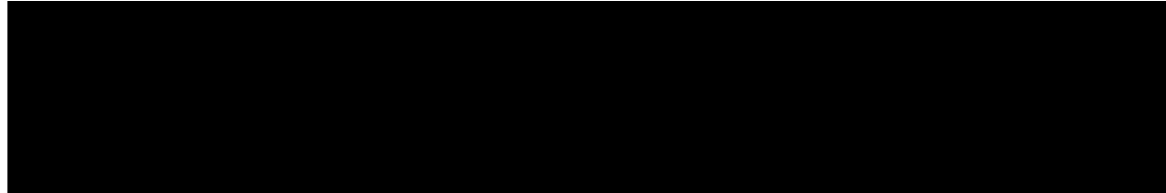
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**To:** Beth Elliott (NCGA)[Elliott@dc.ncga.com]  
**Cc:** Argyropoulos, Paul[Argyropoulos.Paul@epa.gov]  
**From:** Hengst, Benjamin  
**Sent:** Fri 7/11/2014 5:43:17 PM  
**Subject:** Re: Speaker Request -- NCGA Ethanol Committee

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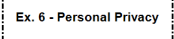
---

**Beth Elliott**

Director, Public Policy | National Corn Growers Association

20 F Street NW, Suite 600 | Washington, DC 20001

[elliott@dc.ncga.com](mailto:elliott@dc.ncga.com) | 202-326-0649 direct



cell

**From:** Drinkard, Andrea [mailto:Drinkard.Andrea@epa.gov]  
**Sent:** Friday, July 11, 2014 7:37 AM  
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U.S. Environmental Protection Agency

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Phone: 202.564.1601

Cell: Ex. 6 - Personal Privacy

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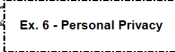
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Director, Public Policy | National Corn Growers Association

20 F Street NW, Suite 600 | Washington, DC 20001

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**Subject:** RE: Speaker Request -- NCGA Ethanol Committee

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Emily Atkinson  
Staff Assistant

Immediate Office of the Acting Assistant Administrator  
Office of Air and Radiation, USEPA  
Room 5406B, 1200 Pennsylvania Avenue NW  
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Beth Elliott

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**To:** 'Atkinson.emily@epa.gov'

**Subject:** Speaker Request -- NCGA Ethanol Committee

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Beth Elliott

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**To:** Minsk, Ron [Ex. 6 - Personal Privacy]  
**Cc:** Karl Simon[Simon.Karl@epa.gov]  
**From:** Hengst, Benjamin  
**Sent:** Thur 7/10/2014 1:09:09 PM  
**Subject:** RE: A Different RFS Question

Hi Ron -- Karl Simon, whom you've met, or one of his managers/staff will be getting back to you on this question. Thanks, Ben

**From:** Minsk, Ron [Ex. 6 - Personal Privacy]  
**Sent:** Wednesday, July 09, 2014 5:10 PM  
**To:** Hengst, Benjamin  
**Subject:** A Different RFS Question

In the recent pathways rule, how does one demonstrate that electricity that was generated from biogas was used to power an electric vehicle, given that there is no way to track the flow of electrons?

Ronald E. Minsk

National Economic Council | The White House

202-456-5197

[rminsk@who.eop.gov](mailto:rminsk@who.eop.gov)